



**VOL. 38**  
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**2004**

ALSO IN OUR NEWS SECTION ■ Cisco's wireless LAN gear has a tough time handling VoIP calls, users say. PAGE 13

■ Some users yawn at the prospect of Microsoft releasing an update to Windows Server 2003. PAGE 16

# COMPUTERWORLD

THE VOICE OF IT MANAGEMENT

MARCH 1, 2004

## SQL Server Delay Forces Users To Adjust Plans

Microsoft postpones shipment again, to 2005

BY MARC L. SONONI AND CAROL SLIMA

Microsoft Corp. last week pushed back the release date of its Yukon upgrade to SQL Server for the third time, forcing some users of the database to modify deployment plans and leaving others unhappy about the extended wait for tool functionality.

Microsoft's latest plan had been to ship Yukon by year's

end. But company officials decided to add a third beta test release, which will delay shipments by as much as six months. The beta test will continue until the first half of 2005, also affecting the next version of Microsoft's Visual Studio .Net development tools, code named Whidbey.

"I'm stunned," said Keith Gilbert, an enterprise data architect at

SQL Server, page 24

### INSIDE

Yukon's delayed release forces users to adjust their plans  
PAGE 20

### Premier 100 Conference

KO  
PREMIER  
IT LEADERS 2004

■ INSIDE: Coverage begins on Page 6. The passion on display struck many attendees. PAGE 29  
■ BEST IN CLASS: Our special Premier 100 executive awards between Pages 20 and 21  
■ ONLINE: Full coverage of what nearly 500 IT executives experienced on site. © Questions? 610/600

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### KNOWLEDGE CENTER PRIVACY

## Compliance Headaches

### SPECIAL REPORT

A patchwork of vaguely worded privacy laws makes it tough for IT to do the right thing, and outsourcing makes it hard to control what happens to personal data. Stories begin on Page 35



### ONLINE QUIZ

How well do you know the dos and don'ts of responsible information handling?  
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## Diversity in IT Supply Chain Pays Off, CIOs Say

Tapping suppliers that are owned by women or minorities can expand skill set, customer base

BY JAIKUMAR VIJAYAN

Using small suppliers or companies owned by women or minorities in the IT supply chain can give buyers better access to specialized skills and more opportunities for cost reduction, said 100 from several large organizations at a conference here last week.

Having a diverse supplier base can also help attract and

### Benefits of Diversity

- CIOs say buying from small and minority-owned technology companies can yield:
- Lower costs
  - Better access to specialized skills
  - More involvement with and commitment to projects

more business, said the 100 attendees at the annual meeting of the National Association of Black Supply Chain Executives. The group's 2004 conference, "The Power of Diversity," was held March 1-4 in Washington, D.C.

The meeting was the latest in a series of events

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# 03.15.04

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In the Management section: They have a variety of titles, but these data administrators straddle the worlds of IT and business to ensure data quality and standardization. Page 27



## OPINIONS

- 10 On the Mark:** Mark Hall learns that the best e-commerce search tool might yield the least information.
- 20 Marylyn Johnson** reminds us that the most successful IT operations are driven by one key element: passion.
- 20 Pimm Fox** says the people who have the answers you need can be hard to find, but a knowledge management system can put their expertise at your fingertips.

- 21 Alexander Katsnelson** argues that new software begets more development work, so if some of that work is outsourced overseas, the U.S. still stands to gain ...

- 25 ... but Robert L. Mitchell** disagrees. He says that the very innovations that the IT industry created are driving IT jobs abroad.

- 31 Barbara Gomolinski** advises IT leaders to rethink the whole concept of strategy development.

- 54 Frankly Speaking:** Frank Hayes is glad ISPs are fighting spammers in earnest. However, there may be a gotcha for you and your work-at-home users.

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## KNOWLEDGE CENTER PRIVACY

- Compliance Headaches**  
Protecting consumer and employee privacy isn't easy. A patchwork of inconsistent and vague laws make it tough for IT to do the right thing, and the outsourcing trend means that more data is in the hands of outside parties. This special report will help you get up to speed on the challenges.

PACKAGE BEGINS ON PAGE 35.

- 36 Privacy Pitfalls:** IT managers like Kirk Herath of Nationwide Mutual (left) offer advice for avoiding potholes when complying with privacy regulations.

- 38 Losing Control:** Here are tips for controlling sensitive customer data when it's in the hands of a third-party outsourcer.

- 40 CPOs: Hot or Not?** New privacy-related regulations have resulted in more chief privacy officers. Yet many of these newly minted CPOs are narrowly focused on regulatory compliance and are simply adding privacy tasks to their existing job functions.

- 41 QuickStudy:** Are you confused by the barrage of terms being thrown around in the privacy debate? This glossary might help.

- 42 The Almanac:** Bell Labs software allows mobile phone users to specify where location information they wish to share, where with whom and under what criteria. Plus other research tidbits about privacy in the information age.

- 44 Opinion:** Columnist Jay Cline says the RFID community needs to counteract the public hysteria about possible RFID privacy abuses. **ONLINE:** Read Cline's views on a variety of privacy topics, from identity theft to privacy seals.

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- Test Yourself:** Do you know the rules of responsible information handling? Take this quiz to find out.  
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- Book Excerpt:** "Personalization plus privacy equals profit," says author Anne Cavoukian and Tyler Hamilton in this excerpt from *Privacy For Business*. Stephen Cobb outlines five crucial issues for Web

- site managers.  
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- Opinion:** All bark and no bite? Columnist Mark Willoughby weighs in on the impact of California's SB 1306 identity protection bill.  
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## IT LEADERS

Our Premier 100 conference featured a spirited debate over IT's relevance and much more.

## NEWS

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- 13 Cisco WLANs** don't cut it for some voice users.
- 13 SAP plans** to unify its NetWeaver middleware suite.
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## NEWS PREMIER 100

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(Left) and Nicholas G. Carr debated Carr's controversial claim that "IT doesn't matter."

## Speakers Clash in Spirited Debate Over IT Relevance

BY KATHLEEN MELNYKUKA  
AND TODD R. WEISS  
PALM DESERT, CALIF.

**D**OES information technology matter anymore? In a sharp debate that marked the end of Day 1 of Computerworld's Premier 100 IT Leaders Conference, author Nicholas G. Carr asserted that IT has

largely lost its ability to provide companies with a competitive advantage, and Bob Metcalfe, the inventor of Ethernet, rebutted Carr's views.

The users in attendance were so enthralled by the speakers' arguments that they continued to question them for a half-hour after the session was scheduled to end.

Carr, a former editor at *Harvard Business Review*, began by recounting his article "IT Doesn't Matter," which ran last year in that publication (QuickLink A330). In the article, he argued that IT applications and infrastructure, though essential to business and integral to business processes, have become so easily replicable that they no longer provide sustainable competitive advantage.

"When everyone is at parity, profit goes to customers, not to the bottom line," Carr said.

Like railroads, telephones and electricity, IT has become part of the general business infrastructure—absolutely necessary to compete but no longer strategic, he said. Companies still don't realize this, and as a result, they spend much more aggressively on IT than they should, Carr added.

Today, Carr said, risk management in IT is more important than innovation, and the biggest risk is overspending. "Companies should have a bias to spend less year over year for IT," he said. "Follow, don't lead. Even small delays can save you lots of money and risk."

But Metcalfe, the inventor of Ethernet and currently a principal at Polaris Venture Partners Inc. in Waltham, Mass., came out swinging.

"Carr has called you impulsive, happy, wasteful, lavish spenders, counterproductive and lured into passivity by a chorus of hype," he said. "So many people have debunked Carr before me that I feel like Elizabeth Taylor's ninth husband: I know what to do, but how do I make it interesting?"

Metcalfe argued that IT matters to the tune of \$1.8 trillion in IT spending in 2003, according to figures from IDC in Framingham, Mass. And yet, he said, Carr concludes "that you people should stop spending wildly, stop being suckers, stop squandering corporate assets unless you want to end up on some Barbados-Osley perch walk."

Metcalfe said Carr chose to cite only studies that support his thesis. "Studies have shown that studies show what they're intended to show," he said. "Be suspicious of studies."

The unsung heroes in the IT machine are the IT leaders in the Premier 100 audience, Metcalfe said. "If Carr's advice is followed, how will new technologies find markets and perfect?"

Finally, he said, Carr is not only wrong, but he's also dangerous because "he has succeeded in misleading the vast majority of *Harvard Business Review* readers, who read only the titles." Unless his views



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So many people have debunked Carr before me that I feel like Elizabeth Taylor's ninth husband: I know what to do, but how do I make it interesting?

BOB METCALFE



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NICHOLAS G. CARR

## Building a Plug-and-Play IT Staff

BY THOMAS HOFFMAN  
PALM DESERT, CALIF.

If executives at many companies are exploring ways to make their thinly stretched staffs more modular and responsive in order to quickly move people between business units and projects,

"Developing an agile IT staff" is a significant challenge that we've spent a lot of time addressing," said Martin Coburn, chief technology officer at the National Association of Securities Dealers Inc. (NASD) in Rockville, Md. Coburn was one of several IT executives who discussed IT staffing at Computerworld's Premier 100 IT Leaders conference here last

week. When Coburn became CTO for the organization that regulates the Nasdaq Stock Market three years ago, his group was spending 75 to 80 cents on maintenance for every dollar spent on application development, he said. To lower those costs and free up IT staff, NASD last year began sending some application maintenance work off-site, starting with non-mission-critical applications. As a regular of a securities market, said Coburn, NASD has to develop nearly all of its software applications in-house. "It's not like there's a lot of off-the-shelf software we can use to do this," he said. But because NASD

# NEWS PREMIER 100

COMPUTERWORLD March 15, 2004

are thoroughly debunked. Metcalfe said, "today's current crop of MBAs will be running WordPerfect on 286s," and American ingenuity will be "strangled in the bassinet."

The debate stirred a wide range of reactions from the audience.

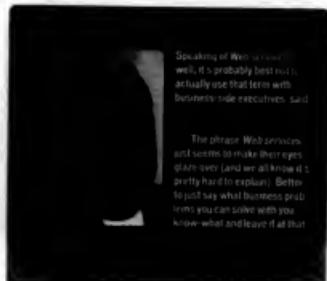
Roger Zaikaria, director of information systems for the restaurant technology support field service of hamburger chain Jack in the Box Inc. in San Diego, said he disagrees with Carr's conclusions but can understand his cautionary message about not jumping into new technologies too quickly.

"My concern was his logic," Zaikaria said. "If as an IT industry, we do not take calculated risks and invest money into these [new] products, eventually, directly or indirectly, that's going to halt the innovation cycle, and that's going to have an even more detrimental negative impact on our business."

James Berry, vice president of development for payroll and human resources applications at Automatic Data Processing Inc. (ADP) in Roseland, N.J., said Carr made some valid points in his presentation but Metcalfe "made the same argument I would make."

**Speaking of Web services**  
well, it's probably best not to actually use that term with business-side executives said

The phrase Web services just seems to make their eyes glaze over [and we all know it's pretty hard to explain]. Better to just say what business problems you can solve with you know what and leave it at that



is able to farm out a fair amount of its application maintenance, it has been able to lower its software support costs "to about 25 cents on the dollar," he said.

Bruce Philpott, assistant vice president of database administration at Raymond James Financial Inc., a financial services firm in St. Petersburg, Fla., said he believes the ability for IT organizations to be more responsive to business-unit demands "is centered more around having mature processes."

Philpott maintained that if an IT organization has mature business processes and an effective IT governance plan, "you can more easily react to changing business conditions," in part by tapping contract help as needed.

Another financial services firm, Af-

lance Capital Management LP in New York, has bolstered its application development staff from about 92 people to 100 over the past six months, said Richard K. Ronan, senior vice president of global investment management technology.

**Convincing Business People**  
But while Alliance Capital Management has sent some of its application maintenance offshores to reduce costs, Ronan said he's still undecided about how to sell business managers on the concept of sending some development overseas. "If we add five offshore developers at the cost of one U.S. developer, business executives will want to know whether they're delivering one-to-one productivity with our developers here and how the economics of this

would play out," said Ronan. Programmers at his company are nearly all cross-trained on development skills such as Java, C and C++, Ronan said, "so that we can more easily move them from project to project, depending on where they fit best."

Companies that have been growing their IT staffs, as Raymond James and Alliance Capital Management have done, remain exceptions. Most companies with pent-down IT departments continue to struggle to deliver daily tech support and application technicians to a backlog of IT projects that piled up when the economy went soft.

J.R. Simplot Co. had to reduce the size of its global IT staff by about 10% to around 340 people 18 months ago, said Roger Parks, vice president and COO at the food and agriculture con-

cern. "There are two sides to every story, and somewhere in the middle, there's the truth. That's very apt in this case."

Thomas Hupf, director of information systems for business safety and regulatory compliance vendor JL Keller & Associates Inc. in Neenah, Wis., said he thought that "Carr won the debate but lost the argument." The bottom line, he said, is that IT innovation is good, as long as a business can capitalize on it for a worldwide period of time. "If you can either extend the window of opportunity or figure out how you're going to capitalize on it in the window you have, then it makes sense to do it," Hupf said.

Carr, though, incorrectly dismissed such a strategy, Hupf said. "There will be a lot of one-hit wonders. But if you can figure out how to take advantage of that window, do it — even if your window's a short one."

By always moving forward with IT innovations, even if competitors quickly adopt them, a company can show customers that it's on the leading edge of development, which can attract new customers, Hupf said. "A pattern of innovation" tells customers you're ahead of the curve and worth doing business with, he said. © 45408

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During the various Premier 100 conference sessions, attendees were asked their opinions on a wide range of IT issues. The results of one poll appear below. To access all of the results, visit our Web site ([view this page's resource registration](#))

Are vendor lobbying groups such as ITAA having a positive or negative impact on cybersecurity progress?



Helping to lead the fight in support of all users

Self-serving, politically motivated

Pay no attention to these groups

glomerate in Boise, Idaho.

But Parks began changing the company's IT governance model as he came aboard four years ago, and as a result "we've been able to put more IT people to work directly in the business units to better support their needs," he said.

Under the decentralized model, IT workers are distributed throughout J.R. Simplot's business divisions, but the IT department itself still controls technology spending.

Parks said that he believes the approach has enabled his staff to deliver IT projects that are better aligned with business specifications. That has helped the company reduce its IT spending by about 23% over the past four years, Parks said. © 45418

# 100 PREMIER IT LEADERS



BOB METCALFE (left) and Nicholas G. Carr debated Carr's controversial claim that "IT doesn't matter."

## Speakers Clash in Spirited Debate Over IT Relevance

BY KATHLEEN MELVINA  
AND TODD R. WEISS

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"When everyone is at parity, profit goes to customers, not to the bottom line," Carr said.

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## Building a Plug-and-Play IT Staff

BY THOMAS HOFFMAN  
JOURNALIST, CIO

It's common at many companies for executives to make their thinly stretched staffs more modular and responsive in order to quickly move people between business units and projects.

Developing an agile IT staff "is a significant challenge that we've spent a lot of time addressing," said Martin Colburn, chief technology officer at the National Association of Securities Dealers (NASD) in Rockville, Md. Colburn was one of several IT executives who discussed IT staffing at Computerworld's Premier 100 IT Leaders conference here last

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The debate started a wide range of reactions from the audience.

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## CONFERENCE BLOG



This is an excerpt from Computerworld's business editor Mitch Bain's conference blog. To read the full blog, go to our Web site: [@QuickLink](#)

Speaking of Web services, well, it's probably best not to actually use that term with business-side executives, said Palmer Collyer, director of IT infrastructure at Atlanta-based AT&T. The phrase "Web services" just seems to make their eyes glaze over (and we all know it's pretty hard to explain). Better to just say what business problems you can solve with your know-how: what and leave it at that.

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## SPARRING WITH CARR

To read a full transcript of the debate, visit our Web site:

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[www.computerworld.com/quicklink](#)

"If you only have a short time to have your sustainable advantage over competitors," Barrs said, "that means you have to be even faster with IT," rather than slowing your investments as suggested by Carr. Barrs said ADP and its competitors make improvements in their products, and then they copy one another in a cycle of bringing improvements for customers. "It's very important [to keep up with one another], but it doesn't give us a sustained advantage," he said.

## Some Agreement

Not everyone thought Carr's conclusions were completely off base.

Roger Reep, senior vice president of systems development at MasterCard International Inc. in O'Fallon, Mo., said he agrees with Carr's position that IT has become more infrastructure centric, rather than innovative. "We're managing a lot more infrastructure, as opposed to the revolutionary types of things that happened in the past," Reep said. "I actually thought that both [Carr and Metcalfe]

would play out," said Reep.

Programmers at his company are nearly all cross-trained on development skills such as Java, C, and C++, Ronan said. "What we can more easily move from one project to project, depending on where they fit."

Companies that have been growing their IT staffs, as Raymond James and Alliance Capital Management have done, remain exceptions. Most companies with cut-down IT departments continue to struggle to deliver daily tech support and application techniques in a backlog of IT projects that piled up when the economy went soft.

J.R. Simplot Co. had to reduce the size of its global IT staff by about 10% to around 240 people 18 months ago, said Roger Parks, vice president and CEO at the food and agribusiness con-

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Thomas Hugel, director of information systems for busi- ness safety and regulators, compliance vendor IIJ Keller & Associates Inc. in Novato, Wis., said he thought that "I won the debate but lost the argument." The bottom line, he said, is that IT innovation is good, as long as a business can capitalize on it for a worthwhile period of time. "If you can either extend the window of opportunity or figure out how you're going to capitalize on it in the window you have, then it makes sense to do it," Hugel said.

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## POLL RESULTS

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Are vendor lobbying groups such as ITAA having a positive or negative impact on cybersecurity progress?

**65%**

POSITIVE  
Helping to lead the fight in support of all users

NEUTRAL  
Self-serving, politically motivated

NEGATIVE  
Pay no attention to these groups

glomerate in Boise, Idaho.

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## Panelists Offer Tips on Improving IT Security

BY GARY H. ANTHES

A panel of IT managers told attendees at Computerworld's Premier 100 IT Leaders Conference here last week that the federal government has had

some positive impact on corporate security, mostly via regulation and legislation such as the Health Insurance Portability and Accountability Act of 1996.

"I will tell you that your health data is significantly more secure today than it was yesterday," said Linda Reina, who is the CIO at Universal Health Services Inc., a state of Pennsylvania.

Reina said that government agencies such as the U.S. Food and Drug Administration have helped her strengthen risk-reducing vendors and making their products more secure.

Now, wide-ranging government regulations helped push The Guardian Life Insurance Company of America to establish a "holistic approach" to risk management, said Marc S. Sokel, Guardian Life's chief security officer. The New York-based company created the position of computer security officer, which has responsibility for IT security but also oversees physical security, disaster

recovery and other risk management functions, he said.

Panelists said it's sometimes hard for IT managers to strike a balance between customer service and security. "You want to be an enabler; you don't want always say no," said Al Brusonitz, chief information security officer and CIO for the County of Los Angeles.

They agreed that employee education — while "not sexy" as one panelist put it — is really the linchpin for security. William Farro, CIO at the Chicago Board of Trade, said a woman cleaning a conference room there became suspicious of a laptop left running overnight. She reported it to security, and it was later discovered that someone had left the laptop running port-scanning software aimed at the company network.

Asked how the board of Trade had gotten even low-level employees to be so savvy about security, Farro answered, "We scare people."

Adherence to security principles is part of the employee contract, he said.

Senior managers have to be educated, too, but you have to communicate with them in ways they can relate to, Sokel



The panel discussed ways to respond to IT security demands.

said. "We don't talk about port scans or buffer overflows," he said. "We talk about information disclosure."

Reino offered this advice on employee education: "Make it a part of daily conversation in every project meeting. We make it clear that every project has responsibility for security. You have to make it a part of day-to-day operations."

She also said it's important to publicize employee-caused security incidents internally, not necessarily naming the employee who made a mistake, but doing it in a way that others learn from the error.

Panelists singled out wireless and mobile computing as sources of special concern but said limiting their use isn't a

solution. Modern medicine demands that hospital workers carry wireless devices, Reino said, but wireless networks must be protected by encryption and intrusion-detection software.

Rob Clyde, chief technology officer at Symantec Corp., said strong encryption for wireless is necessary but not sufficient. "It's not enough for worms and viruses; worms can crawl right through," he said.

Several panelists said they equip employees' home and mobile PCs with the same security software, such as antivirus software, that's used in the office. "We mandate the antivirus product you use," Reino said. "We can't live with your decision." □ 45422

### CREDIT DUE



In the opening keynote speech, American Express Co. CIO Bill Seltz offered a framework to answer the question: "Do our technology investments generate strategic value?"

To read more, visit our Web site:  
□ QuickLink 45306

## Consolidation Remains High on IT Pros' Agendas

BY PATRICK THIBODEAU  
PALM DESERT, CALIF.

The drive to consolidate servers and data centers began in earnest after the dot-com bust as a remedy for the excesses of rapid IT growth in many enterprises. And consolidation remains a top IT issue for a lot of reasons, even if some of the cost savings aren't exactly what vendors promise.

Vendors "get all excited about how you can get all the benefit from server reduction," said Gary Shanker, director of information systems enterprise infrastructure services at Arizona Public Services Corp. Shanker cited claims that as many as eight servers could be easily reduced to one, but he said the best he has been able to do is con-

solidate four servers to one at the Phoenix-based utility. Limits on the ability of a server to support multiple applications without conflicts have restricted further consolidation, Shanker said.

Many of the IT managers interviewed at Computerworld's Premier 100 IT Leaders Conference here last week said they're involved in extensive server and data center consolidation projects. And while their views vary about a consolidation's potential for savings, they said there are many reasons for undertaking one.

Compliance with the Sarbanes-Oxley Act wasn't a consideration when Michael Gaynor, senior vice president and CIO at Federal-Mogul Corp., began his consolidation effort 18 months ago. But improving the ability to audit

IT in order to meet compliance requirements has since emerged as a key reason behind the move.

The Southfield, Mich.-based supplier of automotive components consolidated nine data centers into one last year and plans to take out nine more this year. The goal is to reduce the number of data centers to two: one in the U.S. and one in Europe.

Gaynor said consolidation is also an essential step when considering outsourcing. Federal-Mogul runs its IT systems in-house, but Gaynor said he's looking at strategic sourcing of his IT infrastructure — something he can't do until he cuts his own costs.

"What you need to do as a business manager is first clean up your own house," said Gaynor, adding that if he doesn't reduce his costs, an outsourcing partner will take those savings. Once a company saves money through consolidation, "if you can get another 25% or 30% out of an enterprise, it might make it worth something," he said.

Ken Har, IT director at the Detroit Medical Center (DMC), has been consolidating servers for five years in ease support and maintenance and to cut costs. The consolidations often come in response to new acquisitions by the 12,000-employee health care organization, which operates 10 hospitals, two nursing cen-

ters and other facilities in Michigan.

Application conflicts sometimes arise, and if Har is dealing with a unique application, he may leave it on its own server. But many DMC hospitals share applications, so much of Har's work is focused on physical consolidation, such as using blades and racks and sharing a common network infrastructure and management capability.

Server consolidation isn't the answer for everyone. Mark Naylor, CIO at Hunter College, a Toronto-based institution with more than 45,000 full- and part-time students, said server consolidations require costly testing to ensure that applications don't conflict. Consolidating also increases the possibility that a security breach on one server could lead to a larger problem.

"People costs are more important to me than the cost of a server," said Naylor. "My people resources are very limited, so it's not for me to go buy another server." □ 45421



The closing speech was delivered to a very engaged audience by author and consultant Steve Jobs.



# NEWS PREMIER 100

www.computerworld.com

## Panelists Offer Tips on Improving IT Security

BY GARY H. ANTHES  
PALM DESERT, CALIF.

A panel of IT managers told attendees at Computerworld's Premier 100 IT Leaders Conference here last week that the federal government has had

some positive impact on corporate security, mostly via regulation and legislation such as the Health Insurance Portability and Accountability Act of 1996.

"I will tell you that your health data is significantly more secure than it was yesterday," said Linda Reino, who is the CIO at Universal Health Services Inc. in King of Prussia, Pa.

Reino added that government agencies such as the U.S. Food and Drug Administration have helped her strong-arm reluctant vendors into making their products more secure.

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Gaynor says consolidation is also an operational step when considering outsourcing. Federal-Mogul runs its IT systems in-house, but Gaynor said he's looking at strategic sourcing of his IT infrastructure — something he can't do until he cuts his own costs. "What you need to do as a company manager is find a way to open your house," said Gaynor, adding that if he doesn't trust someone, an outsourcing vendor will take those savings. Given a company saves money through consolidation, "If you can get another 25% to 30% out of an outcome, it might make it worth something," he said.

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THE DMC COLLEGE, A TOWSON-BASED INSTITUTION WITH MORE THAN 45,000 STUDENTS, IS CONSIDERING SERVER CONSOLIDATION.

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## Sears, CSC Start Outsourcing Talks

**S**ears, Roebuck and Co. said it will negotiate an IT outsourcing deal that's expected to be worth about \$2 billion over the next 10 years with Computer Sciences Corp. If the companies agree on a contract, CSC would take over management of the retailer's systems, networks and decision-support technology. Sears CEO Gary Kelly told Computerworld in January that he planned to outsource much of the company's IT infrastructure [QuickLink 44112].

## Oracle Must Share Discount Data

A federal judge ordered Oracle Corp. to give the U.S. Department of Justice information about the discounts it has offered to software buyers. The judge agreed with the DOJ that the information could be material to the lawsuit the agency filed in an attempt to block Oracle's hostile takeover bid for PeopleSoft Inc.

## IT Savings at DHS Unclear, GAO Says

The U.S. General Accounting Office released a report saying that it's unclear how much, if any, money has been saved by the U.S. Department of Homeland Security's consolidation and integration of systems from 22 federal agencies. DHS officials relied upon "an informal and undocumented process" to review and approve more than \$4 billion in IT investments, the report said.

## Short Takes

**IBM** ([www.pcworld.com/article/1000000/1000000/ibm.html](http://www.pcworld.com/article/1000000/1000000/ibm.html)) said it plans to buy **TRUEGUIDE INC.**, a Dallas-based developer of software that manages end-user access privileges across multiple systems. **COMPUTER ASSOCIATES INTERNATIONAL SOFTWARE INC.** has bought **MIRIMAN SOFTWARE INC.**, a Santa Barbara, Calif., vendor of desktop migration tools.

## ATG Buys Musician's Friend

# ATG Gives End Users Less Info ...

... in order to get them the right answers to their queries on e-commerce Web sites. **Or that's the theory.** Cliff Conneighton, senior vice president of marketing at Art Technology Group Inc. in Cambridge, Mass., argues that sites using traditional search tools overburden people with too many possibilities. "They often get too much information to make a decision," he says. ATG's answer? "We'll give them as few answers as possible, maybe just one," he proclaims. "Hopefully, the

**The one, true answer machine will arrive at the end of March** in the form of ATG's Adaptive e-Customer Assistant (AeCA) module to the ATG Campaign Package. What makes Conneighton so confident that the \$20,000 AeCA module will work is that it ties a site's content to user profiles in its knowledge base. "We're not just indexing random data on the site," he says. Also at month's end, ATG will ship its Campaign Optimizer module, which uses a GUI tool so simple even marketing managers can use it. It lets users define, create and conduct their own product-comparison tests. Do blue sneakers sell better than yellow ones on hangers? Who cares? Certainly not you any longer, because with the new tool, marketers won't be asking you to create those time-consuming comparison programs. At \$80,000, it's probably a cheap price to keep those marketing types out of your part of the building. **Silicon Valley has its garages, Oregon has its barns.** That's where Musician's Friend Inc. started its mail-order music-equipment business in Medford, tucked in the southwest part of the state. The 20-year-old company is now part of Westside, Calif.-based Guitar Center Inc., a \$1.2 billion distributor of musical gear. And it's moved from stacking guitar cases on its bales to putting them in a cavernous 250,000-square-foot distribution center in Kansas City, Mo. And it runs a major e-commerce site along with a 300-person call center in Salt Lake City. The catalog and Web business are split equally. The IT operations, still based in Medford, have been touted as the reason the company did so well financially in 2003, growing its profits by 46%. In its most recent earnings release, the company said, "Solid supply chain execution enabled us to capitalize on high

traffic at our Guitar Center stores and, as a result of our improved infrastructure and systems at Musician's Friend, we were poised to take advantage of increased Internet demand." While giving the lion's share of the credit to his team and management for their work and support, DJ Biell, director of IT at Musician's Friend, also credits Veritas, for Veritas, a well-established integration tool from Wrike Inc. of both the company's "matrix-up" inventory application and its ability to link Web operations software to the HP 3000 legacy system, referred to in the press release. He's particularly jazzed about Veritas' stream's object-oriented design. Code written for its platform selected years ago is still useful today, he says. Veritas will also be crucial during the inevitable massive application migration effort when the **HP 3000 gets reluctantly put to pasture**, sometime late 2008.

So Biell will be pleased when later this month Wrike ships Veritaspace 5.5. According to Shaen Wolfe, Wrike's president and chief operating officer, in addition to freshening up the GUI, the upgrade will "smooth out the differences between Java and .Net," Wolfe says. "While it may be in a company's best interest to stick to either Java or .Net, they always end up with a hybrid environment." Some applications can never run too fast. That's the logic behind the product strategy at NetScalar Inc. in Santa Clara, Calif. It ships appliances that boost the performance of software by managing TCP IP connections more efficiently and applying compression of higher-level protocols such as HTTP traffic. By fall, the company says it will ship an appliance that will be able to apply advanced compression/decompression techniques on TCP traffic, which can be particularly useful for SLA-dependent applica-

tions used inside a VPN. © 45413

## Smarter Printers

This fall, **Business Data Systems Inc.** in Fairfield, N.J., will ship the first of its multifunction printers equipped with software from Notable Solutions Inc. (NSI) in Gaithersburg, Md. The software integrates documents processed by the printer into a variety of document management systems. NSI's five-year exclusive contract with Hewlett-Packard Co. expired this year.

**Storage Management Initiative Specification**, a set of common models and application programming interfaces that will let storage management applications control disk and tape devices from different vendors.

The new suite works with Enterprise Storage Server disk arrays, known informally as **Shark**, plus IBM's midrange **FAST** arrays and SAN Volume Controller virtualization software. IBM said the new product also supports some functionality on arrays made by Hitachi Data Systems Corp. and Hewlett-Packard Co. © 45419

## IBM Bundles Storage Management Tools

BY LUCAS MEARIAN

IBM last week announced a storage software suite that it said at least partially fulfills a utility computing plan to let storage devices be centrally managed and automatically allocated to application servers. The new suite, called Total Storage Productivity Center, supports the discovery, monitoring and provisioning of disk and tape arrays as well as storage networking equipment. IBM's rollout matches recent moves by EMC Corp.

and Veritas Software Corp. Mike Fisch, an analyst at The Cliper Group Inc. in Wellesley, Mass., said IBM is moving closer to allowing storage capacity to be provisioned on demand. But like its competitors, IBM still lacks depth integration with hardware made by other vendors, he added.

"It's like a jigsaw puzzle, and they're throwing all these pieces out onto the table," Fisch said. "It's hard for us ... to put it all together and understand how it fits. But it

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**TotalStorage Productivity Center** combines Tivoli SAN Manager and Tivoli Storage Resource Manager with a new device discovery tool called Tivoli Multiple Device Manager.

Jeff Barnett, manager of market strategy at IBM's software division, said the device management tool is designed around the Storage Networking Industry Association's



## AT DEADLINE

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## BRIEFS

### U.K. Agency Pulls Plug on EDS Deal

The U.K. National Health Service said it has pulled out of a 10-year, \$1605 million contract that called for Electronic Data Systems Corp. to install a centrally managed e-mail system. The agency signed a similar deal with British Telecommunications PLC last year, one year after EDS was awarded its contract. EDS said it had been meeting its contractual obligations and will seek compensation for the termination of the deal.

### Dell Adds VMware Tools to Servers

Dell Inc. said it will bundle server-virtualization software developed by VMware Inc. with some configurations of its PowerEdge servers. The deal expands Dell's technology partnership with EMC Corp., which acquired VMware in January. Dell will also handle first-level technical support calls on the VMware tools, which are being offered on the servers along with EMC's Clariion disk arrays.

### Microsoft Patches Three Security Flaws

As part of its monthly security update, Microsoft Corp. issued patches for Outlook, MSN Messenger and the Windows Media Services software included with Windows 2000. The company initially didn't rate any of the security flaws as "critical," but it later upgraded the severity of the Outlook flaw to level 1. Separately, Microsoft released a third service pack of security updates and bug fixes for Office XP.

### Short Takes

Antivirus software vendors warned about a new variant of the Sasser e-mail worm that masquerades as a security patch from Microsoft. ... IBM is buying Trig Technology Inc., a Brisbane, Calif.-based vendor of software for storing product-related information, for an undisclosed price.

# Vendors Eye Cheaper Switching at Net Edges

Foundry, Extreme expand product lines for connecting PCs to core networks

BY MATT HAMBLER

**F**oundry Networks Inc. and Extreme Networks Inc. today plan to separately announce edge-switching technology that promises users lower costs and improved functionality. San Jose-based Foundry is introducing two FastIron Edge X-Series rack-mounted switches that offer 10 Gigabit Ethernet uplinks capabilities to core networks at a price of \$3,250 per port. That's about half the cost of chassis-based switches, Foundry officials said.

Extreme in Santa Clara, Calif., is announcing that its Unified Access architecture and Power over Ethernet capability will be extended to its Alpine 3800 series switches, which can be used in small core networks or on network edges. Extreme has offered Unified Access since last April on its Summit 300 edge switches to provide wired and wireless access on a single device that also supports Power over Ethernet. This frees IT managers from needing to have separate infrastructures for wired and wireless LANs.

#### Keeping Up With PCs

Edge switching accounts for about 40% of all switch revenues, said Joel Conover, an analyst at Current Analysis Inc. in Sterling, Va. He added that there's a constant need for innovation at the edges of networks to keep up with new technologies in desktop PCs and other end-user devices.

The Information Sciences Institute (ISI) at the University of Southern California this week plans to begin testing Foundry's new X424 and X440 switches inside 12 wiring closets, using the devices to connect 350 PCs to a data center in Marina del Rey, Calif. ISI is

running 10 Gigabit Ethernet between the wiring closets and the data center, said Richard Nelson, the institute's director of computing.

"We're always looking for innovation," Nelson said, pointing to the need to provide high bandwidth to computers that are linked for research into grid computing and the idea of interfacing

computer chips with biological tissues.

The San Francisco Museum of Modern Art has connected 20 wireless access points to Extreme's Summit 300 switches, partly to take advantage of their Power over Ethernet capability, said IT director Leo Ballate. He added that the Unified Access architecture also provides security and administration features on the switches and not in the access points, which



## Cisco Continues Security Push

BY JAHNIKA WILSON

Who better to deliver network security than the vendor of most of your networking equipment?

That appears to be the thinking behind Cisco Systems Inc.'s strategy, as the company last week released another round of products aimed at helping companies detect and respond to network intrusions more efficiently.

The products include a new IP source tracking technology for locating network entry points for denial-of-service (DoS) attacks, transparent firewall support that allows users to segment networks into security zones and management software for Cisco routers.

Together, the new capabilities build on Cisco's Self-Defending Network strategy, said Steve Collin, a director at the company. Under the initiative, Cisco is trying to build technologies that can automatically detect and respond to network threats better than stand-alone security products can.

The IP source tracking function, for instance, will make it easier to detect a DoS

attack and shut down malicious traffic. Similarly, the network segmentation that's enabled by the transparent firewall support gives companies a way to create "trust zones" within a network, Collin said.

Integrating security at the network level is crucial, said Jon Duren, chief technology officer at Ixia/Aire Technologies Inc., a Knoxville, Tenn.-based provider of electrical test and analysis services at truck stops. Stand-alone security products such as firewalls, intrusion-

#### New Products

are more vulnerable to hacking. Because Unified Access will now be available on the Alpine product line, Ballate said he would consider moving to those switches as the museum grows, but not for a couple of years.

Max Fissi, an analyst at Framingham, Mass.-based IDC, said sales of 10 Gigabit Ethernet ports saw a "huge uptick" in last year's fourth quarter. Shipments totalled about 5,000 ports, four times the third-quarter level, according to Fissi.

But he added that the technology remains a "drop in the bucket in terms of the larger switch market" and questions how many companies need 10Gbit/sec. throughput now. "I'm skeptical as to the extent this will be used, but it's future-pricing your network," he said. **© 45423**

detection systems and antivirus software by themselves aren't enough to deal with the increasing sophistication of network attacks. Duren said. As a result, there's a growing need to find a way to more effectively tie such devices together and share the information that's being gathered, he said.

Cisco is the pre-eminent supplier of enterprise network equipment, is in a good position to do that, said Jeff Wilson, director of Infonetics Research Inc. in Sun Jose.

"Cisco is really the only vendor that can take this position, because they not only offer the security products but the network equipment as well," he said.

But there are caveats. Since Cisco is trying to be a one-stop shop, its technologies may not always measure up to products from more specialized vendors. "A lot of companies that sell stand-alone products would take issue with the quality of the individual [security] components that Cisco has," Wilson said.

Also, over the long term, Cisco is going to have to address issues such as Web services and application-level security, he added. **© 45415**

# Some Wireless IP Phone Users Shun Cisco WLAN Gear

**Change vendors despite Cisco's 'fast roaming'**

By Bob Brown

Despite Cisco Systems Inc.'s rollout last year of so-called fast roaming capabilities for wireless LANs, some IT managers said they have switched to WLAN equipment from other vendors because of concerns about quality of service or wireless phone calls.

Cisco's WLAN architecture is built around smart access points, which contain much of the intelligence that controls handoffs as users roam from one location to another. That requires wireless devices to reauthenticate and obtain new IP addresses from back-end servers as they're moved — a process that can disrupt voice communications, according to users and analysts.

For example, Pacific Sunwear of California Inc. had problems supporting wireless voice-over-IP calls on a Cisco 802.11b WLAN that was installed to support voice and data traffic at its new headquarters in Anaheim, Calif., said Ron Ehlers, the clothing retailer's vice president of information services.

Pacific Sunwear equipped 30 employees with wireless VoIP phones from SpectraLink Corp. after it opened the building last year. But Ehlers said that he soon began receiving complaints about dropped calls when users roamed from room to room, especially in areas where there was heavy data traffic.

## Roaming improves

Late last year, Ehlers called in Meru Networks Inc., a Sunnyvale, Calif.-based start-up that sells a central WLAN controller. He said the voice roaming problems went away immediately after Meru installed its equipment. Ehlers replaced all 16 of his Cisco access points with Meru's controller and access point technology early this year.

## WLAN Strategies

**Cisco: Uses distributed installations of access points to control WLANs, although it has added support for setting up master devices.**

**Praxis Corp., Symbol Technologies Inc., and other vendors: Offer centralized switches and controllers to offload authentication of wireless devices as end users move from place to place.**

Sirf Technology Inc., a San Jose-based maker of chip sets for Global Positioning System devices, experienced similar problems with SpectraLink and Cisco 7920 VoIP phones operating over Cisco's WLAN access points, said Ian Chonister, Sirf's MIS manager.

Chonister also replaced the Cisco infrastructure with a Meru WLAN, a switch announced in December. It was an unusual move for Sirf "because we could be a poster

child for Cisco," he said, noting that his networks are otherwise all-Cisco.

Ron Seide, WLAN product-line manager at Cisco, said the company recognizes that VoIP places more demands on its WLAN technology than data sessions, which can tolerate gaps of one or two seconds as a user moves from one access point to another in a network.

Last June, Cisco introduced what it calls fast, secure roaming features to its IOS inter-

networking software.

Fast roaming is supported within a single access point that acts as a master device for wireless domain services, allowing quick authentication as users roam, Seide said.

Cisco also detailed a longer-term WLAN upgrade strategy called Structured Wireless-Aware Network, which will eventually support central management of wireless devices from its line of wired switches and routers.

Seide said he wasn't familiar with the installations at Pacific Sunwear or Sirf. But he added that he thinks they could have resolved their VoIP problems by doing thorough site surveys to guide the placement of access points and by using Cisco's fast roaming software.

Brad Noblet, director of technical services at Dart-

mouth College in Hanover, N.H., said he recrified voice call handoff problems on a campus WLAN by using the fast roaming functionality. But Noblet said he doesn't think Cisco's WLAN architecture can scale enough to support a planned expansion that will provide wireless IP phone service to all 4,000 Dartmouth students, plus faculty and administrative staffers.

Dartmouth has tapped Aruba Wireless Networks Inc. to provide the college with its switch-based WLAN technology and about 1,000 access points, Noblet said. © 45424

## CAMPUS NETWORK

**Bear hotel uses centrally managed access points to prevent the most frequent way to expand Dartmouth's WLAN**

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## SAP Streamlines Middleware Suite

By Marc L. Sondini

SAP AG this week plans to unveil a more unified version of its NetWeaver middleware that's designed to end some of the headaches for users, who now need to coordinate the applications and integration tools that make up the suite.

SAP last week confirmed that it's moving to align the components of the NetWeaver suite, which includes the company's data warehouse software, an integration broker and other products (see box).

"Going forward, we'll update NetWeaver annually, with all the pieces being updated and synchronized together," said SAP America Inc. spokesman William Wohl.

Eventually, users will be able to run the entire suite on a single server, something that isn't possible now, he said.

The new version will also include support for radio frequency identification tags,

so users can develop RFID-enabled supply chain management processes. Wohl declined to comment on when the upgrade is due for release.

Some users who are running pieces of the middleware suite were enthused by SAP's plan to unify NetWeaver, which has assumed a central role in the software vendor's long-term strategy since it was announced early last year.

"The products were never built to be together at the same time," said Mike Perroni, vice president of IT at Halliburton Co. in Houston. That means users have to worry about whether NetWeaver components will work with one another, he said. And if there's a glitch with the software, getting it resolved can be "very time-consuming and make the process of upgrades very complex," Perroni added.

Halliburton, which offers energy, engineering and con-

struction services, runs SAP's R/3 ERP applications, plus its port and data warehouse software. Perroni, who is also a director of the independent Americas' SAP User's Group (ASUG), said that Halliburton will look at the possibility of running the portal and data warehousing technology on the same server in the future. "Today, every component requires one or more boxes to be installed," he said.

## Responding to Feedback

The upcoming improvements should help make it easier to add third-party applications to R/3, said Lori Schrock, global business process manager at silicone products maker Dow Corning Corp. in Midland, Mich. Schrock, another ASUG director, said SAP is making the changes partly in response to feedback from the group's members that "we can't afford to manage multiple releases that aren't synchronized."

SAP is trying to keep middleware vendors such as IBM and BEA Systems Inc. out of

its ERP installed base by throwing in NetWeaver when users license its mySAP Business Suite, said Garner Inc. analyst Yvonne Genovese.

"The whole goal is to bring it on to a single platform at a single price," she said, noting one potential downside: SAP might focus more on making the suite interoperable than on adding new features. © 45408

## TECHNOLOGY DETAILS

### NetWeaver

A master data management initiative that harmonizes information from different applications

A composite applications framework with templates and tool kits for creating business workflows across systems

SAP's Business Warehouse and Enterprise Portal applications

Hooks for integrating with Microsoft .Net and J2EE technologies like IBM WebSphere

## U.K. Agency Pulls Plug on EDS Deal

The U.K. National Health Service said it has pulled out of a 10-year, \$166 million contract that called for Electronic Data Systems Corp. to install a centrally managed e-mail system. The agency signed a similar deal with British Telecommunications PLC last year, one year after EDS was awarded its contract. EDS said it had been meeting its contractual obligations and will seek compensation for the termination of the deal.

## Dell Adds VMware Tools to Servers

Dell Inc. said it will bundle server virtualization software developed by VMware Inc. with some configurations of its PowerEdge servers. The deal expands Dell's technology partnership with EMC Corp., which acquired VMware in January. Dell will also handle first-level technical support calls on the VMware tools, which are being offered on the servers along with EMC's Clariion disk arrays.

## Microsoft Patches Three Security Flaws

As part of its monthly security updates, Microsoft Corp. issued patches for Outlook, MSN Messenger and the Windows Media Services software included with Windows 2000. The company initially didn't rate any of the security flaws as "critical," but it later upgraded the severity of the Outlook flaw to that level. Separately, Microsoft released a third service pack of security updates and bug fixes for Office XP.

## Short Takes

**Antivirus software vendors** warned about a new variant of the Sasser e-mail worm that masquerades as a security patch from Microsoft. ... **Tropic Technologies Inc.**, a Brisbane, Calif.-based vendor of software for storing product-related information, has an undisclosed price.

# Vendors Eye Cheaper Switching at Net Edges

**Industry, Extreme expand product lines for connecting PCs to core networks**

BY MATT HAMBLEN

**F**ounder, Extreme Networks Inc., and Extreme Network's plan to segrega te its enterprise edge switching business into two entities that promises users lower costs and improved functionality.

San Jose-based Founder is introducing the two last month. Its X-Series rack-mounted switches cost under 10 Gigabit/s to support capabilities to core networks at a price of \$2,580 per port. That's about half the cost of business-class switches Founder officials said.

Extreme's Jim Clark, is announcing that its Unified Access Infrastructure and Power over Ethernet capability will be extended to its Xplore 3800 series switches, which can be used in small office networks or on network edges. Extreme has offered Unified Access since last April on its Summit 300 edge switches to provide wired and wireless access on a single device that also supports Power over Ethernet. That makes IT managers from needing to have separate infrastructures for wired and wireless LANs.

### Keeping Up With PCs

Edge switching accounts for about 40% of all switch purchases, said Joel Conner, an analyst at Current Analysis Inc., in Sterling, Va. He added that there's a constant need for automation at the edges of networks to keep up with new technologies in desktop PCs and other end-user devices.

The Information Sciences Institute (ISI) in ISI, at the University of Southern California, this week plans to begin testing Founder's new X424 and X448 switches inside Esri's wiring closets, using the devices to connect 56 IP PCs to a data center in Marina del Rey, Calif. ISI is

running 10 Gigabit Ethernet between the wiring closets and the data center, said Richard Nelson, the institute's director of computing.

We're always looking for innovation, Nelson said, pointing to the need to provide high bandwidth to computers that are linked for research into grid computing and the idea of interlocking

computer chips with biological tissues.

The San Francisco-based Modern Art has come up with less expensive points-to-Extreme's Summit 300 switches, partly to take advantage of the Power over Ethernet capability, said IT director Joe Ballone. He added that the Unified Access architecture also provides security and administration features on the switches and not in the access points, which



NELSON says his new switches that deliver high bandwidth.

## Cisco Continues Security Push

BY JAIKUMAR VIJAYAN

Who better to deliver network security than the vendor of most of your networking equipment?

That appears to be the thinking behind Cisco Systems' strategy, as the company last week released another round of products aimed at helping companies detect and respond to network intrusions more effectively.

The products include a new IP-source tracking technology for locating network entry points for denial-of-service (DoS) attacks, transparent firewall support that allows users to segment networks into security zones and management software for Cisco routers.

Together, the new capabilities build on Cisco's Self-Defending Network strategy, said Steve Collins, a director at the company. Under the initiative, Cisco is trying to build technologies that can automatically detect and respond to network threats better than stand-alone security products can.

The IP-source tracking function, for instance, will make it easier to detect a DoS

attack and shut down malicious traffic. Similarly, the network segmentation feature, enabled by the transparent firewall, gives companies a way to create "trust zones" within a network, Collins said.

Integrating security at the network level is crucial, said Jon Durkin, chief technology officer at iDefense Technologies Inc., a Knoxville, Tenn.-based provider of cybersecurity services at truck stops. Stand-alone security products, such as firewalls, intrusion-

### New Products

**Lucent 7301 Router** Lucent's 7301 router, a VPN solution designed for mobile workers, has a price of \$20,000.

**Cisco IP-Sec Router** Cisco's IP-Sec router, a security gateway, has a price of \$20,000.

**Linksys IOS Firewall** Linksys' IOS-based Firewall, a security gateway, has a price of \$1,000.

are more vulnerable to hacking. Because Unified Access will now be available on the Alpine product line, Ballone said he would consider moving the Alpine switches to the more-expensive ports, but not for a couple of years.

Mark Hines, an analyst at Birmingham, Mass.-based IDC, said sales of 10-Gigabit Ethernet ports, such as those in Cisco's Summit 300 switches, will grow 500% over four years, the third-quarter level, accord ing to Hines.

He added that the technology remains a "drop in the bucket" in terms of the larger switch market, and speculated how many companies need 10-Gigabit switches. "I'm skeptical as to the extent this will be used, but it's future proofing your net work," he said. **Q 45423**

detection systems and antivirus software by themselves aren't enough to deal with the increasing sophistication of network attacks, Durkin said. As a result, there's a growing need to find a way to more effectively tie the devices together and share the information that's being gathered, he said.

Cisco, as the pre-eminent supplier of enterprise network equipment, is in a good position to do that, said Jeff Wilcox, director of Infobranchies Research Inc., in San Jose.

"Cisco really is the only vendor that can take this position, because they not only offer security products but the network equipment as well," he said.

But there are caveats. Since Cisco is trying to be a one-stop shop, its technologies may not always measure up to products from more specialized vendors. "A lot of companies that sell stand-alone products would take issue with the quality of the individual [security] components that Cisco sells," Wilson said.

Also, over the long term, Cisco is going to have to address issues such as Web services and application-level security, he added. **Q 45415**

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Cisco's WLAN architecture is built around smart access points, which contain much of the intelligence that controls handoffs as users roam from one location to another. That requires wireless devices to reauthenticate and obtain new IP addresses from back-end servers as they're moved — a process that can disrupt user communications, according to users and analysts.

For example, Pacific Sunwear of California Inc. had problems supporting wireless voice-over-IP calls on its Cisco 802.11b WLAN that was installed to support voice and data traffic at its new headquarters in Anaheim, Calif., said Ron Hifiers, the clothing retailer's vice president of information services.

Pacific Sunwear equipped 300 employees with wireless DECT phones from Spectralink Corp., after it opened the building last year. But Hifiers said that he soon began receiving complaints about dropped calls when users roamed from room to room, especially in areas where there was heavy data traffic.

## Roaming Improves

Late last year, Hifiers called in Meru Networks Inc., a Sunnyvale, Calif.-based start-up that sells a central WLAN controller. He said the voice roaming problems went away immediately after Meru installed its equipment. Hifiers replaced all 10 of his Cisco access points with Meru's controller and access point technology early this year.

Uses distributed installations of access points to control WLANs, although it has added support for setting up master devices.

## Offer centralized switches and controllers to offload authentication of wireless devices as end users move from place to place.

Sirf Technologies Inc., a San Jose-based maker of chips designed for Global Positioning System devices, experienced similar problems with Spectralink and Cisco 7020 VoIP phones operating over Cisco's WLAN access points, said Ian Christensen, Sirf's VP manager.

Christensen also replaced the Cisco infrastructure with a Meru WLAN, a switch announced in December. It was an unusual move for Sirf "because we could be a poster child for Cisco," he said, noting that his networks are otherwise all Cisco.

Ron Seide, WLAN product line manager at Cisco, said the company recognizes that VoIP places more demands on its WLAN technologies than data sessions, so it can tolerate sessions as long as one or two seconds as a user moves from one access point to another in a network.

Last June, Cisco introduced what it calls fast secure roaming features to its 1080i inter-

## Offer

metaling software.

It's not unique in its efforts to offer centralized WLANs. That's because other IT is increasingly adding services to roaming gear and letting data access points stand alone.

Cisco also developed a longer-term WLAN upgrade strategy called Series 1000 Wireless Access Network, which will eventually support centralized management of hundreds of wireless switches and routers.

Seide said he's not familiar with the installations at Pacific Sunwear or Sirf. But he added that he thinks that could have resolved their VoIP problems by doing thorough site surveys to guide the placement of access points and by using Cisco's fast roaming software.

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SAP AG this week plans to unveil a more unified version of its NetWeaver middleware that's designed to end some of the headaches for users, who now need to coordinate the applications and integration tools that make up the suite.

SAP last week confirmed that it's moving to align the components of the NetWeaver suite, which includes the company's data warehouse software, an integration broker and other products, to be known as

## SOFTWARE UPGRADE

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so users can develop RFP-enabled supply chain management processes. Web declined to comment on when the upgrade is due for release.

Some users who are running pieces of the middleware suite were enthused by SAP's plan to unify NetWeaver, which has assumed a central role in the software vendor's long-term

strategy since it was announced early last year.

"The products were never built to be together at the same time," said Mike Perrone, vice president of IT at Halliburton Co. in Houston. That means users have to worry about whether NetWeaver components will work with one another, he said. And if there's a glitch with the software, getting it resolved can be "very time-consuming and make the process of upgrades very complex," Perrone added.

Eventually, users will be able to run the entire suite on a single server, something that isn't possible now, he said. The new version will also include support for radio frequency identification tags,

energy, engineering and con-

nection services, says SAP R&D R&D director, plus its portal and data warehouse software. Perrone, who is also a director of the independent Americas' SAP Users Group (ASUG), said that Halliburton will look at the possibility of running the portal and data warehousing technologies on the same server in the future. "Today, every component requires one or more boxes to be installed," he said.

## Responding to Feedback

The upcoming improvements should help make it easier to add third-party applications to R&D, said Tom Schuck, global business process manager at silicone products maker Dow Corning Corp. in Midland, Mich. Schuck, another ASUG director, said SAP is making the changes partly in response to feedback from the group's members that "we can't afford to manage multiple releases that aren't synchronized."

SAP is trying to keep middleware vendors such as IBM and BEA Systems Inc. out of

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## NetWeaver

Components include

A massive data management module that harmonizes information from different applications

A composite applications framework with template and tool kits for creating business workflows across systems

SAP's Business Warehouse and Enterprise Portal applications

Tools for integrating with Microsoft .Net and J2EE technologies like IBM WebSphere

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NAME  
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Simon Potens

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# Microsoft Likely to Update Win Server '03, but Many Users Shrug

New edition may collect feature packs released since product's launch in April

BY CAROL SLIWA

**M**ICROSOFT Corp. confirmed earlier this month that it will likely introduce an update to Windows Server 2003 that includes the add-on feature packs it has released since the product shipped last April.

But for some users of those features, it's not a big deal.

"We are getting what we need separately. That is that an attraction? Not necessarily," said Larry Godke, CIO at First American Title Insurance Co. in Santa Ana, Calif.

"It would be nice if they were there, because you wouldn't have to go looking for them," said Keith Gilbert, an enterprise data architect at Labor Ready Inc. in Tacoma, Wash. "But it's not a huge issue. The fact that they're out there and you can go get them, it's easy enough."

Jeff Price, a senior director in Microsoft's Windows Server group, said many cus-

tomers have been looking to the company to make add-on features, such as SharePoint Services and the Group Policy Management Console, "easy to consume" and to have a "high level of integration."

Price noted that customers currently pick and choose which features they want to add to their servers from Microsoft's Web site, and he said that process "works pretty well." But Microsoft thinks it "can have even more customer success by having that delivered in a vehicle that's easier to consume and install and upgrade," Price added.

Although the feature packs are already designed to be integrated with Windows Server 2003, Microsoft would need to release an update to provide an administrator with an "integrated management and in-

stallation experience" across all of the add-on technologies, Price said.

Godke said better management of the overall pieces of functionality would be helpful. But said his company would have to carefully evaluate what it gets today vs. what it would gain from the new release. "We wouldn't necessarily upgrade just for the sake of upgrading," he said.

Gilbert said application testing needed to upgrade to a new version of an operating system can be costly and time-consuming. "I don't know many IT departments that take upgrades lightly," he said. "Everyone has to do due diligence. You can't just go around upgrading because Microsoft has put out a new version."

Price said the proposed update to Windows Server 2003 won't simply be a repackaging of the product with existing add-on features. He said it also may include new technologies

that have yet to be released.

"We'll consider the broad range of technologies that are ready at the time we do this update," Price said. "And based on customer feedback, we'll see what we can put in."

## Wants Choice of Features

A database services manager at an international cosmetics manufacturer and retailer said he would welcome the chance to get specific new features prior to the next release of Windows, code-named Longhorn. He said he plans to use one of the feature packs that's currently available, Automated Deployment Services. "A new release inclusive of all these tools would be great, as long as through the installation process, I can deselect those I don't want," said the manager, who asked not to be named.

But he said there can be a downside to having features available simply through check boxes. For example, the manager said he doesn't want Internet Information Server enabled on database servers, yet some administrators who are accustomed to having IIS

enabled go back and install it.

If the Windows Server update emerges, customers who purchased Microsoft's Software Assurance plan for the product will be able to get it as part of their maintenance contract. They pay an annual fee of 25% of the server license cost for Software Assurance. Price said Microsoft hasn't decided if there will be a change for Windows Server customers who didn't buy Software Assurance.

Price added that he's not sure when the server update might become available, although it's expected before Longhorn.

After initially saying Longhorn would emerge in late 2005, Microsoft hasn't provided a definitive update on the expected ship date. Neil Charney, a director of product management for Windows, said Microsoft plans to release a beta version by the end of this year and will re-evaluate the ship date based on the beta feedback. **Q 4547**

## WINDOWS XP RELOADED?

Speculation grows about a possible release of Windows before Longhorn.

**QuickLink 45429**

**Partner-caught** For a summary of Windows Server 2003 feature packs, visit our Web site.

**QuickLink 45420**  
www.computerworld.com

Continued on page 1

## Diversity

"Small suppliers are some of our best and most creative partners in technology," added Linda Dillman, CIO at Bennington, Ark.-based Wal-Mart Stores Inc.

Since 1994, Wal-Mart has spent close to \$4 billion buying technology from small or minority-owned businesses, and it's now encouraging its major suppliers to do so as well.

Unlike larger technology suppliers, small companies are generally more flexible and willing to accommodate specific customer needs, Dillman said. They also can bring high-

ly specialized skills that larger vendors may not always possess, she said. For instance, Aeris Inc., a small pharmacy systems supplier in Raleigh, N.C., helped Wal-Mart build an interactive voice-response-based prescription-refill application after larger vendors said they were unable to do so.

The 80-employee company also maintains Wal-Mart's in-store music and TV programming systems.

### Less Overhead

Small companies are usually cheaper from a contracting standpoint because they don't have as much overhead as their larger counterparts, said Bruce Carver, vice president and CIO at PepsiCo Beverages

& Foods in Chicago.

And having minority suppliers is also "part of doing good business," especially for companies with diverse customer bases, he said. With a large portion of PepsiCo's growth coming in major urban areas and among the Hispanic population, "how and who we do business with" is becoming important, Carver said.

As a result, PepsiCo, which last year spent only about \$20 million with minority-owned IT suppliers, is taking new measures to increase representation of minorities in its IT supplier ranks, Carver said. For instance, senior technology executives at Pepsi have been asked to spend at least 12% more on minority suppli-

ers this year than they did last year. And all senior executives are going to be evaluated on the basis of "how much business we are doing with minorities," he said.

Small companies tend to be more eager than larger vendors for new business and are therefore sometimes more interested in a project, said Lori-Jeanne Sandler, executive vice president at LINext.com LLC, The Deerfield, Ill.-based online education company, which has used both large and small suppliers in rolling out several enterprise applications, discovered that smaller suppliers display more staff continuity and "commitment to our success," Sandler said.

Even so, small companies

and suppliers owned by women or minorities still need to constantly fight the perception that they aren't equipped to handle difficult projects, said Robert Blackwell Jr., founder and president of Chicago-based application developer Electronic Knowledge Interchange Inc. As a result of that perception, small suppliers are often forced into subcontracting roles for larger technology companies, even though they might be the ones providing the specialized skills, Blackwell said.

Moreover, "minority companies rarely get more than one chance" at a project, he said, so "there's a certain amount of paranoia about screwing up."

**Q 45416**



Linda Dillman says First American won't copay "just for the sake of copaying."

By Carol Sliwa



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MARYFRAN JOHNSON

# IT Passion = IT Power

**P**ASSION CAN PRODUCE amazing results." That's Shelley McIntyre of The Guardian Life Insurance Company of America speaking last week at *Computerworld's Premier 100 IT Leaders Conference* in

Palms Desert, Calif. She was one of more than 700 IT and business executives attending the event. (See pages 6-8 and QuickLink #4100 for the full conference coverage.)

Although McIntyre, a VP of business technology services at the New York-based insurer, was referring specifically to Guardian's award-winning project involving an online annuity system, her comment could just as easily sum up the impact of two powerful days of peer connection and conversation.

I don't use the word powerful lightly here. The collective will of IT leaders can — and should — directly influence technology products and the vendors that sell them.

The most striking endorsement of that idea came in a talk by Alan Paller, executive director of research at the SANS Institute (Quick Link 4335). After demonstrating how easily hackers can break into ostensibly secure corporate networks, Paller urged IT leaders to use their collective power to force vendors to deliver safer software by requiring certain security settings. He noted how Oracle has already complied with such a demand by the U.S. Department of Energy.

Will Paller's call to action have a result? It certainly should. At least 75% of the audience members — surveyed after his talk — declared their intent to start requiring minimum security settings in all future systems purchases, as well as in the external systems connecting to their networks.

In other audience survey questions at the conference (available in a registered part of our Web site at [QuickLink 4315](http://QuickLink 4315)), we asked the assembled executives to identify their most press-



ing IT leadership issues and most critical projects. Topping the leadership issue list were implementing business process re-engineering, streamlining operations and planning the future of the IT infrastructure. Singled out as the most important IT projects were those involving business intelligence/das management, enterprise integration and Web services.

Collecting useful, ac-  
tual ideas about all of those topics and having the time to talk them over with peers are the greatest benefits of a conference like the Premier 100. We also staged the first-ever debate between Nicholas Carr, author of the infamous *Harvard Business Review* article "IT Doesn't Matter," and Bob Metcalfe, Ethernet inventor and now venture capitalist. That exchange stirred up its share of passions, as well (see Quick Link 4332 for a transcript of the debate).



PIMM FOX

## Using IT to Tap Experts' Know-how

**T**HE U.S. GOVERNMENT is using basic knowledge management techniques to offer timely and valuable advice about how to do business abroad.

At the Department of Commerce, a commercial service called the DOC Insider is adopting technology for knowledge capture and management from Bellevue, Wash.-based Askable Corp. The service uses the technology to accelerate the counseling it offers to U.S. companies seeking to engage in international trade.

The DOC Insider has been using Web-based technology to create a knowledge network connecting its 100 offices in the U.S., another 150 to 80 countries overseas and a group of approximately 1,200 U.S. trade specialists who have expertise in what it takes to succeed abroad. These specialists can tell you what trade show to attend if you're interested in selling medical equipment in Germany or what papers to file if you're trying to expand your software business into Japan.

In the past, there was no way to organize what these experts knew, or even how to get in touch with them once they were identified.

Laura McCall, program manager for the DOC Insider, says using Askable's system is part of the department's fulfillment of its mandate to help U.S. businesses compete abroad. "We have a dispersed, worldwide organization with pockets of information everywhere," she says. The DOC Insider's aim is to help U.S. companies do things such as perform international market research or locate overseas partners. "We want to sit down and make sure you've identified a good market and that you are export-ready," she says.

Each trade expert accesses the knowledge network via the Web and logs answers to questions. "That way,



Laura McCall is a program manager for the DOC Insider. Call: Contact her at [lmcall@hq.doi.gov](mailto:lmcall@hq.doi.gov).

we're able to identify the people and the resources to help clients solve problems," says McCall.

Before selecting AskMe, McCall reviewed the department's business processes to see where the gaps in information counseling existed. "We have a handful of trade specialists who know everything about export documentation, for example," says McCall. "But if they're located in Minnesota and you weren't in the local office, you'd never know they existed."

Now these experts can post answers according to different subject categories, upload documents or even direct businesses to specialized publications online. The information is reusable and is in an expanding database. About 1,200 people have used the system so far, saving about 750 hours of repetitive work, says McCall. There's also a reporting tool that managers can use to track the technology's return on investment and identify topics that are popular so they can beef up their expertise in those areas.

With the huge trade deficit that plagues the U.S., a knowledge management system that helps boost U.S. exports by making it easier to tap experts' know-how is a clear competitive advantage. Similar expertise lies hidden away inside most companies.

By 46227

ALEXANDER KATSENLINBOIGEN

## The Peculiar Nature of Software

MUCH DEBATE on offshoring IT jobs revolves around well-known arguments.

Proponents of offshore outsourcing, who are generally averse to protectionist measures, tend to focus on the traditional advantages of free trade, such as a more efficient allocation of labor resources and the benefits of competition for the consumer. Detractors spotlight the hidden costs of offshore outsourcing, concerns about security and the potential loss of skilled IT jobs in the U.S. Their remedies include proposing legislation designed to protect IT jobs and setting employment requirements for companies bidding on government projects.

Recently, an alarm has been sounded that high-end IT work such as the design of software and the development of innovative software is being claimed by companies overseas [QuickLink 450469]. If so, it must be remembered that software has some peculiar aspects, including tremendous job creation potential, no matter where it's developed.

Imagine that a programmer in India writes a program so useful that it creates thousands of jobs for developers in the U.S. to adopt, support and enhance its functionality.

New software products have had this effect many times; software is often not a final product, but instead a versatile tool that can be used in the production of a broad range of goods and services. And advances in software can also open up to automation tasks that were previously off limits.

From this perspective, software de-



**Programmer ALEXANDER KATSENLINBOIGEN**  
West Orange, N.J., is an offshoot of developer and software engineer patterns. You can contact him at [alexander@lycos.com](mailto:alexander@lycos.com).

velopment work spans a spectrum that ranges from the production of final goods to innovative research and development.

The simple commodity development work at one end of the spectrum resembles the manufacturing of consumer goods, and offshore outsourcing may indeed lead to a partial loss of such jobs in the U.S. At the other end of the spectrum is innovative software development. The potential for such software to create jobs suggests that even if some of this work is done overseas, there would still be benefits for U.S. programmers.

So it's difficult to assess the ultimate impact of offshore outsourcing on the software development market in the U.S. Whatever the rally, it's up to us to stay competitive by focusing on technology-intensive development that requires more advanced skills.

Fortunately, software isn't a market

with fixed demand. If enough shirts are manufactured in China, none need be made in the U.S., but the same isn't true of software. Not only is it a market that's still expanding, but its expansion also seems to fuel further expansion. In the foreseeable future, software development will have a multiplier effect. It won't reach a saturation point.

Of course, any technological innovation leads to a shift in the labor market, and there are losers and winners. Usually, winners aren't in the same economic sector as the losers. But given the peculiar nature of software, the ever-broadening number of areas in which it's applied and the fact that the demand for new software is still largely concentrated in the U.S., we're in good shape to gain a piece of the pie.

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## ANOTHER POINT OF VIEW

**Computerworld's Robert L. Mitchell** has other thoughts on the issue of never ending overseas. Read his column on page 25.

 More columns and links to archives of previous columns are on our Web site: [www.computerworld.com/columns](http://www.computerworld.com/columns)

## Testing the 'Talent'

I TALENT FROM India and China has been characterized as dedicated, cheap and just as good as expensive domestic IT staff. My experience has been otherwise. Late in 2002, a group of contractors came to my company from India to work on a pilot project. It was a low-profile until a virus we'd thought we'd eliminated resurfaced. It turned out that the contractors had brought the virus in with them. As the representative from desktop engineering, I spent the next few days with the contractors as I headed the remediation efforts on their laptops. I was not impressed. The laptops they brought in didn't follow a standard configuration, de�uer for any corporate system in the U.S. This could be excused as being typical of machines in the custody of developers, except that nearly all of the laptops had suddenly off-loaded antivirus software and definition files, and about half had no antivirus software installed at all. Needless to say, most of these machines were heavily infected with an assortment of viruses and worms.

Bill McQueen  
San Francisco

## Scrap Spyware

"WE'RE WAITING for one of the antivirus vendors to take the lead in blocking spyware and hostile scripting, but nothing has happened yet," says Michael Sparer, director of security strategy at Symantec. "It amazes me that most major corporations are letting a free-spirited scriptwriter in Germany take the lead in spyware protection with his Spybot."

What's the problem? Spyware and hostile scripts are viruses and Trojan horses.

McQueen and Sparer: I'm waiting for you to do your jobs.

Peter Fine  
Sacramento,  
[peterfine@abcglobal.net](mailto:peterfine@abcglobal.net)

Sure, hackers love to find holes, but they discover force vendors to patch these holes.

**David J. Bernhard**  
Programmer/analyst,  
New Orleans

## Managers' Morals

"I MUST OBJECT to both Mark Heff's characterization of the best project managers as the ones in the column 'Having All the Luck' [QuickLink 44234] and the implication that, to succeed, such individuals must be less than upstanding managers. I would much prefer to read sentiments honoring the creative genius of the best project managers, and their success as a result of the latitude afforded them by their administrative heads."

In reading Heff's commentary, the question arises as to why the project managers he described felt it necessary to follow clandestine tactics in order to achieve their objectives in an effective manner. Did their management not afford them the opportunity or resources necessary to pursue such endeavors under less shady circumstances?

While I agree that the best project managers "aren't single-mind-

ed," the qualities that make them great are bound to their creativity in process and direction, not to a character that is questionable by all others or me.

To suggest that we recruit project managers based on their raw sheet is to suggest compromising the most valid qualities in an employ-ee: honesty and integrity. There is absolutely nothing that would suggest that those qualities and creativity are mutually exclusive or that they are inexcusable in project managers today.

**Galen R. Wark Jr.**  
Director, Rutgers University  
Computing Services,  
Piscataway, N.J.

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IT MANAGEMENT

bmcsoftware

# TECHNOLOGY

03.15.04

**M**AYBE IT'S THE sound of all those tapping feet while users wait for their spreadsheets to open. Maybe management finally woke up to the cost of replacing those hard drives one by one at remote offices.

-Whatever the reason, many companies are upgrading to a common "sweet spot" of 2.3- to 2.6-MHz Pentium 4 desktops and 1.6- to 1.7-MHz Pentium M notebooks, usually with 512MB of RAM and a 40GB to 60GB hard drive. That much is easy. The tougher questions are when to upgrade PCs rather than replace them and how to use this round of purchases to drive down long-term support costs while boosting business benefits. Here are some tips from those who have already struggled to find answers.

## Simplify, Simplify, Simplify

"We had the 'Noah's ark syndrome' — we had two of everything," says Tim Link, CIO at Ohio State University Newark and Central Ohio Technical College. Over the past three years, he has replaced that unwieldy mix of 1,300 client PCs with one of three standard configurations from Dell Inc. PC support calls have already dropped 22%, and Link expects them to be down by 30% when final results are in.

Link has carefully planned how to minimize the number of configura-



# Refreshing THE Desktop

If you're finally replacing old PCs, buy smart to maximize your performance and long-term savings.

By Robert L. Scheier

# Refreshing THE Desktop

Continued from page 23

tions he must support as he replaces one-third of his systems each year. He's reluctant to go to a four-year life cycle for PCs because although that would reduce PC purchase costs, it would mean more individual models, which would complicate support issues.

Trying to open files from different versions of applications running on various versions of Windows is a huge headache for users and IT managers, and can be a prime driver for an upgrade. At the North Carolina Department of Health and Human Services in Raleigh, "it got to the point where a person sent an Excel spreadsheet to somebody else, and they couldn't open it" because they were running a different version of Excel, says CIO Don Allen. "That's when we decided we had to do something."

By July 1, the department hopes to have replaced 5,000 of its approximately 18,000 PCs with new systems from Hewlett-Packard Co based on a single system "image" of the same processor, operating system and office productivity applications.

## The Thin Client Alternative

Blade servers – thin, rack-mounted units that use far less space and power than big, baseline servers – have taken over the data center. Hewlett-Packard Co. has the next step: will be a blade PC – a rack-mounted CPC dedicated to one user and linked to networked storage for easy data backup and recovery.

HP's Consolidated Client Infrastructure, introduced in December, "moves all the infrastructure into the data center, where it's more secure" and can be more easily managed, says Keith LeFebvre, vice president of business PCs for the Americas region at HP's Personal Systems Group. The company claims that it can cut lifetime PC maintenance costs in half.

Steve Achtemer, director of corporate IT management at the Orange, Calif., office of Volt Information Sciences, sees the concept because of its similarities to the X terminal environment he once managed, where only the user interface ran on the client PC and most application logic ran on the server.

"There were some tremendous advantages in terms of more effectively utilizing your computing resources, as well as the maintenance and the support," he says. One possible stumbling block, though, is the cost of any upgrades. Achtemer needs for his WAN to handle the extra traffic on the client PC.

Many customers are looking at more centralized or server-centric computing models because of the frequent security vulnerabilities found in desktops or notebooks running Windows, says Gartner Inc. analyst Mark Margicic. As IT managers put more of a load on the server, he says, this will reduce the need for a new, more powerful client PC on the user's desk.

– Robert L. Scherer

## Keep It Longer

"I've been in the industry more than a decade, and today's stuff is able to run a lot longer [than earlier PCs]," says Roger Wilkins, a senior technical engineer at CNF Inc., a global transportation and logistics company in Palo Alto, Calif. He's replacing some of his older 12,000 desktops and notebooks with new Dell systems and plans to keep them four to five years, "watering down" the most capable PCs to less-demanding users as they are replaced.

Given the high cost of ram, most organizations can safely plan to keep a desktop PC four years, says Mark Margicic, an analyst at Gartner Inc. in Stamford, Conn. If the system fails after the standard three-year warranty period, he suggests replacing it rather than spending time to fix it.

For notebooks, which face tougher handling by users, Margicic suggests sticking to the traditional three-year replacement cycle.

The four-year cycle would fine for John Montgomery, vice president and chief technology officer of Embarcadero Systems Corp., a provider of shipping terminal management services and cargo management systems in Alameda, Calif. By upgrading the memory from 128MB to 256MB, he has managed to upgrade many older systems so they can run Windows 2000.

Some users buy higher-end systems to stretch the machines' life span or reduce the need for future upgrades. For example, Link buys PCs with a 3-GHz processor and a full gigabyte of memory. "I don't want to have to buy a memory upgrade; I don't want to buy a hard-drive upgrade. I'm looking to get these as hands-off as possible," he says.

While PC replacement cycles are stretching out, Margicic suggests that adding memory is about the only work worth doing on an older machine. Dallas-based Wyndham International Inc. is replacing about 2,000 PCs and boosting the memory in another 1,000 from 128MB to 256MB or 512MB. But only systems with at least a 500-MHz Pentium III get upgraded rather than replaced, according to Mark Hedley, senior vice president and chief technology officer.

"It's something as simple as replacing a mouse or a keyboard," it pays to fix the problem without worrying what's inside the box, says Steve Aetserman, director of corporate IT management at the Orange, Calif., office of Volt Information Sciences Inc., a professional services firm. But Aetserman plans to replace Volt systems older than Pentium IIIs with 1,200 to 1,500 PCs from HP by June.

## Don't Forget Service and Support

"Don't get hung up on the name brand," says Wilding. "If you look inside the guts of a PC, they're becoming more and more a commodity item like a toaster." Instead, he says, focus on which contractors the vendor uses to support remote offices and the quality of the vendor's service.

For example, some vendors will automatically replace PCs and even automatically update software for a fixed price per seat. But Margicic warns these services work best for companies with strict controls over what PCs users can buy. If not, he says, "you'll get nickel and dimed" with extra charges to

## TYPICAL CONFIGURATIONS

DESKTOPS	PRICE
2.3- to 3.0-GHz Pentium 4 processor	
512MB RAM	\$800-\$1,500
40GB-60GB hard drive	

NOTEBOOKS	PRICE
1.6- to 1.7-MHz Pentium M processor	
512MB RAM	\$1,500
40GB hard drive	\$2,000

Note: Configuration ranges for average膝上型电脑; pricing reflects corporate discounts, sources: computerworld.com

## WHAT'S HOT, WHAT'S NOT

WHAT'S HOT	WHY
USB key storage	Portable, high capacity, reliable
Optical media	High capacity, low cost
Flat panels	Thinner, less power consumption

WHAT'S NOT	WHY
3.5-in. floppies	Unreliable, low capacity, security risk
CRTs	Use more desk space and energy (but still cheaper than flat panels)

Sources: computerworld.com, partners

support any nonstandard configurations.

Allen is relying on Affiliated Computer Services Inc. in Dallas to perform regular hardware and software updates across offices in all 100 North Carolina counties. IT managers should be sure a vendor has the processes and qualified subcontractors to handle such work over a wide area, he says.

## Remember Education and Training

With the move toward fewer, more standard configurations, users need to learn that "they don't have some of the freedoms they had before," says Allen. Rather than buy new systems whenever they find the money or download software from the Internet, he says, users must accept getting hardware and software upgrades on a departmentwide schedule.

Users also "have to allow some time to come in and replace their systems," says Allen. "They can't tell us 'We're too busy today; come back in two weeks.'" And rather than asking a neighbor for help, he says, they must call the help desk, which can then generate a trouble ticket "so we can track how long it takes to get problems resolved."

Wilding also suggests that corporate IT discuss and agree on procedures with remote offices specifying when a PC should be replaced rather than upgraded. "Set your policies up ahead of time," he advises. "so you're not fighting [over replacements] hit by hit." © 45000

Scheier is a freelance writer in Boylston, Mass. He can be reached at rscheier@charter.net.

**BRIEFS****Telelogic Upgrades UML-based Tools**

Telelogic AB in Malmö, Sweden, announced last week that the new version of its DOORS/Analyst requirements management tool will be integrated with the upgraded editions of its TAU/Architect and TAU/Developer development tools, which are based on the Unified Modeling Language (UML) 2.0 standard. TAU/Developer 2.3, which already supported the C language, will add model-driven code generation for C++ and Java and provide integration with other platforms. The new versions are expected to be released on April 30.

**Hitachi Launches Deskstar ATA Drive**

Hitachi Global Storage Technologies Inc. in San Jose last week announced its highest-capacity 3.5-in. ATA hard drive, the 400GB Deskstar 7K400. The new drive has been designed for audio/video and Serial ATA near-line storage environments.

**SAS Announces Service-Level App**

Business intelligence software vendor SAS Institute Inc. has announced a tool to help companies view their IT organizations, run analysis on relevant data and ensure that corporate performance levels are being maintained. The IT Service Level Management application ships next month and will start at \$30,000.

**Nexware Updates Dev Platform**

Nexware Technologies Inc. in Cambridge, Mass., last week announced availability of Nexware Software Platform 3.0 for building and deploying rich-client Internet applications. New features include a visual development environment, server clustering and support for Web services. Server-based pricing starts at \$30,000.

ROBERT L. MITCHELL

# How IT Has Outsourced Itself

**A**MERICANS HAVE an unwavering faith that technology can solve all of their problems, but they tend to forget that it also creates new ones in the process. The leading edge of technology innovation often cuts both ways. Perhaps the best example of this is the current election-year brouhaha over the accelerating trend of outsourcing U.S. jobs in general — and

IT jobs in particular. IT advances aren't the sole cause of the jobs exodus, but as many laid-off programmers and call center staffers have come to realize, IT innovations have accelerated that trend.

Some effects are subtle. For example, voice-over-IP telephony systems and the ability to route converged voice and data traffic through private global networks is cutting telephone system infrastructure and operating costs. Along the way, IT jobs are disappearing as voice and data networking functions merge. The technology also makes it easier and less expensive to route help desk and customer support calls to distant call centers in places like India, where labor costs may be one-fifth of what companies typically pay U.S. workers.

Likewise, the rise of the PC years ago helped level the playing field for aspiring programmers everywhere by putting unprecedented computing power into the hands of people and institutions that could never have afforded access to a mainframe. And with the emergence of the Internet and collaborative tools, local development groups have evolved into virtual teams with a global reach. Team members can be quickly selected and assembled based on expertise and lowest labor cost.

The rapid pace of technical change has always discounted technical experience, making it easy for the new kid on the block to catch up. New hires, fresh



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from graduate school and steeped in the latest technologies, have often taken the exciting positions while veteran programmers were shunted into dead-end jobs maintaining legacy systems and products. Sorry, the new guy doesn't know Cubit. Today, the new kids aren't even on your block. The plum projects are moving overseas, where competent programmers can be hired for salaries of \$10,000 or less.

Meanwhile, the programming process itself is becoming more efficient and automated, reducing the number of programmers needed. Some companies have begun embracing techniques such as extreme programming, which advocates say improves both productivity and software quality. One company I recently spoke with claimed to have seen a 40% productivity gain on some projects, which greatly reduced programmer time.

Until now, many IT professionals have rationalized that only less desirable, low-level positions were under threat — jobs like the one I once had in a PC vendor's tech-support department. Management there used commercial spyware to monitor my computer and telephone activity, tracked bathroom breaks and put the pressure on to complete as many calls as possible by publicly posting daily statistics on each staff person's call volumes and average call times. Competition was intense because those at the bottom of the list were routinely fired. No one aspires to that kind of job.

But what's shocking to many IT workers is how quickly the better jobs further up the food chain are disappearing. Software engineering and hardware design jobs are following basic programming and call center positions out of the country. In some cases, entire research and development operations are moving to places like India, where companies such as Google have established a presence.

Taken together, these trends add up to tough times for many IT professionals. With as many as one in 10 IT jobs expected to go overseas this year, according to Gartner Inc., and other positions being eliminated, it's not surprising that the unemployment rate in the industry has jumped above the national average. Politicians can rail against the outsourcing epidemic, but protectionist efforts won't stem the tide. Given the compelling business advantages of globalization, this trend will only increase.

What's an IT professional to do? Technologists accustomed to jumping from one hot technology area to the next may soon find that this time, technology alone won't solve their employment problems. Instead, the safest jobs — and the most rewarding ones — will be those that require a deeper understanding of an employer's business and unique business processes. Jobs where staffers work in IT silos — those that can be easily isolated and compartmentalized — are easy to outsource. Jobs that require acting on an understanding of corporate business processes and culture are not.

More than ever, good communication skills matter. The arrogant, antisocial techie who just wants to write code in his cube is an endangered species. Those who work well in collaborative groups are more likely to succeed, and those who can manage multicultural, virtual teams and have strong project management skills will fare even better. Gaining those new skills and positions won't be easy — it never is. But it's much better than the alternative. © 45296

**MORE ON OUTSOURCING**

For another view on the trend of higher-level IT jobs moving offshore, see "The Peculiar Nature of Software" on page 21.



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# MANAGEMENT

03.15.04

They have a variety of different titles, but these analysts work with the IT and business groups to improve data quality and standardization.

By Mary Brandel

**A**CUSTOMER IS A CUSTOMER is a customer, right? Actually, it's not that simple. Just ask Emerson Process Management, an Emerson Electric Co. unit in Austin that supplies process automation products. Four years ago, the company attempted to build a data warehouse to store customer information from over 85 countries. The effort failed in large part because the structure of the warehouse couldn't accommodate the many variations on customers' names.

For instance, different users in different parts of the world might identify Exxon as Exxon, Mobil, Esso or Exxon-Mobil, to name a few variations. The warehouse would see them as separate customers, and that would lead to inaccurate results when business users

performed queries.

That's when the company hired Nancy Rybeck as data administrator. Rybeck now leads a renewed data warehouse project that ensures not only the standardization of customer names but also the quality and accuracy of customer data, including postal addresses, shipping addresses and province codes.

To accomplish this, Emerson has done something unusual: It's building a department with six to 10 full-time "data stewards" dedicated to establishing and maintaining the quality of data entered into the operational systems that feed the data warehouse. The practice of having formal data

## DATA STEWARD

Basic understanding of data modeling  
Basic understanding of DBMS  
Strong understanding of data warehouse.  
Technical writing

stewards is uncommon. Most companies recognize the importance of data quality, but many treat it as a "find-and-fix" effort, to be conducted at the end of a project by someone in IT. Others casually assign the job to the business users who deal with the data head-on. Still others may throw resources at improving data only when a major problem occurs.

"It's usually a seesaw effect," says Chris Enger, formerly manager of information management at Philip Morris USA Inc. "When something goes wrong, they put someone in charge of data quality, and when things get better, they pull those resources away."

Creating a data quality team requires gathering people with an unusual mix of business, technology and diplomatic skills. It's even difficult to agree on a job title. In Rybeck's department, they're called "data analysts," but titles at other companies include "data quality control supervisor," "data steward" or "data quality manager."

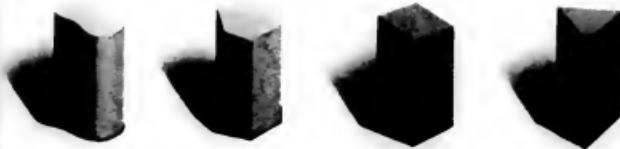
"When you say you want a data analyst, they'll come back with a DBA [database administrator]. But it's not the same at all," Rybeck says. "It's not the data structure; it's the context."

At Emerson, data analysts in each business unit review data and correct errors before it's put into the operational systems. They also research customer relationships, locations and corporate hierarchies; train overseas workers to fix data in their native languages; and serve as the main contact with the data administrator and database architect for new requirements and bug fixes.

Continued on page 30

# Data Stewards SEEK CONFORMITY

PHOTO BY JEFFREY M. STONE





# MANAGEMENT

03.15.04

**A**CUSTOMER IS A CUSTOMER is a customer, right? Actually, it's not that simple. Just ask Emerson Process Management, an Emerson Electric Co. unit in Austin that supplies process automation products. Four years ago, the company attempted to build a data warehouse to store customer information from over 85 countries. The effort failed in large part because the structure of the warehouse couldn't accommodate the many variations on customers' names.

For instance, different users in different parts of the world might identify Exxon as Exxon, Mobil, Esso or Exxon-Mobil, to name a few variations. The warehouse would see them as separate customers, and that would lead to inaccurate results when business users

performed queries.

That's when the company hired Nancy Rybeck as data administrator. Rybeck now leads a renewed data warehouse project that ensures not only the standardization of customer names but also the quality and accuracy of customer data, including postal addresses, shipping addresses and province codes.

To accomplish this, Emerson has done something unusual: It's building a department with six to 10 full-time "data stewards" dedicated to establishing and maintaining the quality of data entered into the operational systems that feed the data warehouse. The practice of having formal data

## DATA STEWARD

### Required Tech Skills

- Basic understanding of data modeling
- Basic understanding of DBMS
- Strong understanding of data warehouses
- Technical writing

stewards is uncommon. Most companies recognize the importance of data quality, but many treat it as a "find-and-fix" effort to be conducted at the end of a project by someone in IT. Others, especially those who deal with the data head-on, still others may throw resources at improving data only when a major problem occurs.

"It's usually a seismic effect," says Chris Enger, formerly manager of information management at Philip Morris USA Inc. "When something goes wrong, they put someone in charge of data quality and when things get better, they pull those resources away."

Creating a data-quality team requires gathering people with an unusual mix of business, technology and diplomatic skills. It's even difficult to agree on a job title. In Rybeck's department, they're called "data analysts," but titles at other companies include "data quality control supervisor," "data coordinator" or "data quality manager."

"When you say you want a data analyst, they'll come back with a DBA [database administrator]. But it's not the same at all," Rybeck says. "It's not the data structure; it's the content."

At Emerson, data analysts in each business unit review data and correct errors before it's put into the operational systems. They also research customer relationships, locations and corporate hierarchies; train other workers to fix data in their native languages; and serve as the main contact with the data administrator and database architect for new requirements and bug fixes.

Continued on page 30

# Data Stewards



#### **Trails**

20-0116



## COMPUTERWORLD

**4** Lincoln Financial's Web services system syndicates company-specific content and applications on its partners' Web sites.

**6** The U.S. Air Force moves to commercial systems to help consolidate infrastructure and centralized management.

**8** Reliant Pharmaceuticals deploys a voice-response sales force automation system instead of shelling out the cash for handhelds for its users.

**10** Northrop Grumman saves \$57 million a year by integrating the IT systems of acquisition Litton Industries.

**12** After a vendor update fails through, Guardian Life Insurance forges ahead with its annuity-processing system.

**13** DHL's project to consolidate its eight North American data centers into one facility saves \$24 million a year.

**14** J.P. Morgan's grid computing project will eventually combine the power of about 2,000 CPUs, saving millions of dollars annually.

**16** Calpine Corp. generates millions of dollars in new revenue by creating a set of real-time interfaces to energy markets.

**18** Visa U.S.A.'s cardholder dispute-resolution system increases consumer satisfaction while cutting millions in costs.

**20** A call-accounting system at Wyndham hotels cuts phone costs by storing telephone tables on a central server.

**22** The Ohio Business Gateway lets businesses conduct transactions online with four state agencies, slashing the state's costs by 42%.

**22** Mental Networks' integrated CRIS system saves the company \$15 million and reduces its abandoned-call rate by 54%.



# Best 100 IN Class

These projects by Premier 100 IT leaders resulted in more nimble organizations that met business imperatives, saved millions, improved customer service or boosted bottom-line revenue. Here's an inside look at their trials and triumphs.



Up with capacity Down with complexity HP StorageWorks Enterprise Virtual Array combines storage with the ability to pool resources, making it easy to control your information. Virtualization ensures capacity is dynamically expanded without disrupting service, giving information room to breathe, and business room to change.

Solutions for the adaptive enterprise.



## EDITOR'S NOTE

# Simple Solutions

WITH SO MANY CHOICES available to us in our everyday lives, it's the simple solution that often goes unexplored. Not so with this year's Best in Class award winners, who took some roads less traveled. They stopped, stepped back, took in the entire breadth of their IT environments and then recast their existing systems. Their choices not only created more nimble IT organizations, but also addressed business imperatives in creative, efficient ways.

Take John M. Gilligan, whose makeover of the U.S. Air Force's IT systems included consolidating infrastructure, centralizing management and standardizing applications. The result: annual savings of about \$200 million. Or Steve J. Bandrowczak, whose project at DHL International to consolidate eight data centers into one state-of-the-art facility is saving the freight company about \$34 million a year.

Now in its third year, Computerworld's Premier 100 Best in Class awards honor such leaders. They are a select subset of the 2004 Premier 100 honorees who have created striking business value through cutting-edge technology projects. To choose this



Photo: C. L. Johnson/Computerworld

year's 12 winners, a panel of outside judges and Computerworld editors reviewed the project candidates, looking in particular for signs of measurable payback, learning experiences, strategic importance to the business, substantive customer impact and new revenue opportunities or cost savings.

Many of these IT leaders applied the basic idea of simplification to some big projects. But with grandness of scale, of course, comes friction and risk.

We hope that reading about how these 12 award-winners overcame those challenges will put you on your own path to simplifying and enhancing your IT environment. ☐ 44670

QuickLink #6660

QuickLink #4080

## The Judges

Special thanks go to our panel of judges, *Computerworld Premier 100 IT Leader* alumnae, who helped evaluate dozens of candidates. They are:



DENNIS L.

CALLAHAN

Senior vice

president and

COO, Guardian

Life Insurance Company of America, New York (2003 honoree)



DANIEL W.

BARNARD

Senior vice

president and COO, Mohr

gen San Casino, Uncasville, Conn. (2003 honoree)



ROB

BICHMAN

Senior vice pres-

ident and COO,

DPS Group Ltd.

San Francisco (2003 honoree)



FREDERICK R.

POND

Director of In-

formation ser-

vices, Schilitar

Group, Portland, Ore. (2003 honoree)



MICHAEL J.

BARNES

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technology strat-

egy and archi-

tecture, Staples Inc., Framingham, Mass. (2002 honoree)



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WEBB

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Premier 100 IT Leaders 2004 Best in Class

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Life Insurance Company of Amer-  
Photo by Michael J. Lippman



**DANIEL W. BARROW**  
Senior vice president of IS and COO, Mohegan Sun Casino, Uncasville, Conn. (2002 honoree)



**RON GLICKMAN**  
Senior vice president and CEO,  
DFS Group Ltd.,  
*Entrepreneur* (2002) [www.entrepreneur.com](#)



**FREDRICK R.  
POND**  
Director of in-  
formation ser-  
vices, Schnitzer  
Group, Portland, Ore. (2003  
present).



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From the **B1+ The Project** menu, select **Print** to print your staff working with vendor **QuickLink a4080**.

# Web Services System

BY MARY BRANSTOR

**T**HAT ONE THING to create a business mantra and quite another to live by it. What's even rarer is for that mantra to inspire the development of an IT system that improves a company's sales distribution and time to market, boosts partner relationships and customer satisfaction, reduces Web site costs and increases corporate recognition.

But that's what the IT team at Lincoln Financial Group in Philadelphia did in January 2003, when it went live with Service Broker, a Web services-based system that syndicates Lincoln-specific content and applications on its partners' Web sites.

It wasn't a project that had an easy solution. Lincoln is a \$4.6 billion provider of life insurance, retirement products and wealth management services. It distributes its offerings through financial advisers, banks and independent brokers.

When Jason Glazier, chief technology and e-commerce

officer at Lincoln, joined the company in 2001, the corporate mantra was, "We want to be the partner of choice," he says. "So I asked, What does that mean from an e-commerce perspective?"

One answer was tighter integration with broker Web sites. In most of the insurance industry, if consumers want to access their ac-

counts or download a form from a broker site, they click on a link that takes them to the insurance provider's site, where they input a separate password or user ID. Lincoln wanted to go a step further, providing content and account access within its partner Web sites, as well as single sign-on for consumers.

The first problem Glazier's group encountered was brand conflict — brokers wanted their sites to retain their own look and feel. Clearly, if Lincoln wanted to be a "partner of choice," it also had to hand over the branding reins.

The second problem was a technical one. Simply outlining the Lincoln content in an HTML frame wouldn't provide the partner's look and feel. A pure Web services approach was also out, since most of Lincoln's clients couldn't support that kind of system. "It is not a hassle-free implementation, since the partner must then process the XML/SOAP messages," Glazier says.

For a short time, Lincoln maintained subsites for its partners that wanted them, and those sites linked to requested content. However, maintenance of the subsites was burdensome.

The ultimate answer was Service Broker. It took three developers four months to build the pilot of Service Broker, which is a Web services-based application with a front end that Glazier calls a servlet. When the servlet is installed on a partner's server, it provides a wrapper that can accept Lincoln's content and applications and still maintain the partner's look and feel.

The servlet manages many of the functions the partner would have to manage in a



Self technology and e-commerce: Here's Lincoln Financial Group

Web services application, such as authentication, digital signatures, passwords and page rendering. When the partner wants to include Lincoln content or an application, it needs to insert just one line of code, Glazier says.

Because the project represented such a new idea, one challenge was to develop a demo so customers could visualize the system's capabilities. This entailed keeping a close watch on how much money was initially invested.

"We knew they may not take us seriously because insurance companies are not usually known as innovative," Glazier says.

When customers did see it, says Rob Pal, Lincoln's vice president of e-business and production services, about 40% were interested in this type of full-scale syndication. Currently, Service Broker is fully implemented at five client sites. Implementation is in progress at three others, and five more

clients are reviewing the Service Broker agreement.

There was some resistance on the part of clients that didn't want an outside source controlling technology on their sites, according to Matthew Jozefowicz, manager of the insurance group at Celent Research in New York. However, resistance was overcome by the application's power and ease of use.

According to Glazier, Service Broker was not only completed on time and un-

der budget, at a cost of \$545,000, but it has also exceeded business objectives.

For instance, since the deployment, Lincoln's growth rate with syndicated partners has increased manifold, according to Glazier. In three cases, clients have granted Lincoln premier "shelf space" on their Web sites. Time to market has also improved; it now takes days to syndicate customized content and applications, vs. the months it previously required.

Service Broker has also reduced Web subtitle development costs, each of which averaged \$15,000 in annual expenses. And, according to Pal, it has improved partner relationships. "In one instance, we were new to a customer, and now we're one of their top carriers," he says. "There are a lot of factors involved, but syndication is one of them."

In addition, Glazier says, there has been a significant increase in the sale of Lincoln's products and services through the brokers using the technology. "There is no doubt in our management's mind that our syndicated technology relationship is partly responsible for this," he says.

According to Jozefowicz, Lincoln is the only insurer that doesn't require consumers to leave a partner's Web site to access its information. "Lincoln's initiative makes it easier for partner distributors to do business with them, which Celent research has shown to be a critical factor in driving carrier choice among independent agents," he says. ☐ 44445

*Brandel is a freelance writer in Grand Rapids, Mich. Contact her at mary.brandel@comcast.net.*

## BEST IN CLASS

# Lincoln Financial SYNDICATES CONTENT WITH Web Services System

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### Lincoln Financial Group [www.lfg.com](http://www.lfg.com)

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**■ IT department:** 800

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# Network Consolidation Effort

BY PATRICK THIBODEAU

CIO JOHN M. GILLIGAN is leading a makeover of the U.S. Air Force's IT systems that involves consolidating infrastructure, centralizing management, standardizing applications and building a foundation for Web services. It's a vast project, affecting some 500,000 personnel stationed across 110 military installations.

It's also a network-centric project, which will give the Air Force the means of "leveraging information across the spectrum of our warfighting operations to give us significant combat advantages."

tag," says Gilligan, who oversees the agency's multi-billion-dollar IT operations.

When this project began in 2001, the Air Force's IT landscape was decentralized, fragmented and expensive to maintain. While the agency had strong IT operations, it lacked consistent technical standards and operating procedures. Without uniformity, IT managers couldn't be assured, for instance, that a new enterprise-wide application would work everywhere.

To correct these problems, cut IT costs and improve services, the Air Force began consolidating servers and

## U.S. Air Force

[www.af.mil](http://www.af.mil)

■ **Organization:** Inclusive 100,000,000 personnel and 10 CIOs at major commands

■ **Project champion:** John M. Gilligan

■ **IT department:** 80,000

■ **Project prognosis:** E-mail services have been cut from 1,400 to fewer than 300. Remote management of desktops has reduced costs by 50%. Some 2,000 Air Force personnel and their families freed up to move to other jobs.

networks and setting uniform policy and technical standards. It also began moving to commercial systems, which were already in wide use on many bases, such as Microsoft Corp.'s Active Directory and Systems Management Server, as well as Hewlett-Packard Co.'s OpenView for systems and network management.

"We really didn't have much of an option," says Gilligan. "To do what we wanted to do, we had to rely on commercial technology — it works, and it's pretty good."

In adopting commercial technology, the Air Force is

## Interactive Voice Response System

BY BOB BREWSTER

RONALD J. CALDERONE, CEO of Reliant Pharmaceutical LLC, discovered that when it comes to building a sales force automation system,

the human voice makes for a very good interface — at a very good price.

Reliant, a privately held company in Liberty Corner, N.J., that sells hypertension

beta-blockers and cardiac drugs, needed timely data from its salespeople, who call on physicians who prescribe such medications. But Calderone quickly determined that it would cost \$4 million to \$6 million to equip Reliant's sales force, which is projected to grow to 900, with handheld computers and link them into a sales force automation system like those used by major drug companies. He simply didn't have that money in his budget.

That's when Calderone decided to tap an asset the

salespeople already had — their voices — and couple that with an interactive voice-response (IVR) system called Victor, which

stands for Voice Interactive Tracking & Operations Repository. The system provides the company with detailed and timely data on sales calls accessible from a SQL database.

While Calderone declines to provide specific financial details, he says Reliant developed Victor using a combination of commercial speech-recognition technologies for a cost-



Ronald J. Calderone,  
CEO, Reliant Pharma-  
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JOHN M. GILLIGAN, USAF, CHIEF INFORMATION OFFICER

"[We're] leveraging information across the spectrum of our war-fighting operations to give us significant combat advantages.

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ple of hundred thousand dollars." He says the system, which the company started building in early 2002 and rolled out to its entire sales force about a year later, "had a payback of much less than a year."

Dan Miller, an analyst at Zelos Group Inc. in San Francisco, says IVR systems offer a low-cost alternative to mobile hardware and sales force automation software.

"IVR systems are not expensive, and they're not rocket science," Miller says.

"The true payback is timeliness," says Calderone, who notes that before Victor, the Reliant sales force used pa-

per forms for call reports. That information took eight weeks to trickle in from an outside data entry contractor. Now, Reliant gets the results of those sales calls overnight, he says.

Using IVR prompts, Victor guides sales personnel through a series of questions analogous to data fields, such as doctors called, location, products and other information. Responses are stored in a SQL database. Victor is so easy to use, Calderone says, that user training takes about one hour.

Robin McWilliams, Reliant's manager for telecommunications, says it wasn't any more difficult to inte-

grate a practice that has been gaining steam since the Clinton administration. Federal agencies have been replacing legacy systems with commercial ones with the goal of improving interoperability and integration and reducing costs.

The Air Force's push is part of a broader U.S. Department of Defense goal for network-centric services delivery. But the Air Force has been "a little bit of a leader" in bringing together commercial off-the-shelf software with existing systems to satisfy those objectives, says Ray Bjorklund, an analyst at Federal Sources Inc. in McLean, Va. The Air Force work is influencing similar efforts at the Navy and DOD, he says.

But the Air Force is holding onto one proprietary technology: its security systems. "The code is not available commercially, and we believe that gives us some additional level of confidence," says Gilligan.

A major challenge was overcoming cultural resistance from IT organizations that were used to some degree of independence.

First, Gilligan got feedback from top Air Force officials. He then developed measurement metrics and helped foster competition among various commanders in meeting project objectives. With 10 CIOs at major commands reporting to Gilligan, the competition is such "that one organization wants to be out front, so they actually accelerate," he says.

The Air Force has nearly completed its network and server consolidation and estimates that new abilities such as remote desktop management are helping it save \$200 million per year.

"Our objectives are the same: to give our war fighters a consistent, easily accessible set of capabilities anywhere in the world," says Gilligan. "And we also hope to get the benefit of some cost efficiencies." □ 44362

grate data from Victor into the company's systems than it would be to integrate any other type of data. Thanks to Victor, "voice is just another form of data," he says.

Though Reliant built Victor with existing IVR software and hardware, including Dialogic voice-processing boards from Intel Corp. and speech software from Nuance Communications Inc. and the Sony Pictures division of Sony Corp., Calderone says the company has 32 patents pending on Victor. He adds that Reliant is now looking for a marketing partner to sell the system — which could further add to this project's payback. □ 44371

LEADER

BEST IN CLASS

# U.S. Air Force GOES COMMERCIAL WITH Network Consolidation Effort

BY PATRICK THIBODEAU

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GETS LAST SALES DATA WITH  
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## PREMIER VICTORY LEADERSHIP: BEST IN CLASS



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Robin McWilliams, Reliant's manager for telecommunications, says it wasn't any more difficult to inte-

### Reliant Pharmaceuticals LLC

[www.reliantrx.com](http://www.reliantrx.com)

■ **Business:** Markets pharmaceutical products to U.S.-based physicians. Reliant has more than 100 corporate employees and 750 sales reps.

■ **Project champion:** Robert J. Calderone

#### ■ IT department: 18

■ **Project goals:** IVR systems were installed at a fraction of the cost of handheld computers. Results of sales calls are now received overnight, instead of the previous turn-around of eight weeks.

grate data from Victor into the company's systems than it would be to integrate any other type of data. Thanks to Victor, "voice is just another form of data," he says.

Though Reliant built Victor with existing IVR software and hardware, including Dialogic voice-processing boards from Intel Corp. and speech software from Nuance Communications Inc. and the Sony Pictures division of Sony Corp., Calderone says the company has 32 patents pending on Victor. He adds that Reliant is now looking for a marketing partner to sell the system — which could further add to this project's payback. **G 44371**

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A constantly changing business needs IT that changes with it. HP OpenView management software used by every Fortune 100 company lets you see, control and automate a mixed IT environment from any location. The result? Your IT stays in sync with the demands of your business and suddenly change doesn't seem like such a scary thing.  
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Solutions for the **adaptive enterprise.**



# IT Integration Project

BY MARY BRANDEL

**Y**OU KNOW you've done something right when you can apply the wisdom gained from one project to save time and money on the next. That's the experience Thomas W. Shelman's team at Northrop Grumman Corp. had when it completed the huge IT integration project necessitated by the acquisition of \$3 billion Litton Industries Inc. in 2001.

Considering Northrop Grumman's growth-through-acquisition strategy, that was a pretty important outcome. Since Litton, Northrop has acquired \$2.6 billion Newport News Shipbuilding and \$10.7 billion TRW. According to Shelman, it has integrated those IT systems in half the time it took to do the Litton integration.

"We made sure we captured processes of integration so we could repeat them for future acquisitions," says Shelman, CIO at Northrop. "It is essential for the company to look and act like one company, have efficient and secure access to computing resources from anywhere, use standard network protocol, calendar and desktop image and one way to collaborate."

During the Litton acquisition, Shelman had more than

that hanging over his head. Shareholders were promised a high level of savings, particularly from IT. But his group did better than expected, delivering \$38 million in annual IT savings, expected to grow to more than \$600 million cumulatively over the next 10 years.

But even though the \$12 million project came in on time and \$4 million under budget, it wasn't all smooth sailing. For one thing, Litton was a big pill to swallow. The company had 26 separate IT entities supporting four businesses and 15,000 users at 64 sites.

**Northrop  
Grumman Corp.**  
[www.northropgrumman.com](http://www.northropgrumman.com)

Photo: Northrop Grumman

Shelman's team had to integrate those separate groups into one centrally managed shared service, migrate Litton's Active Directory infrastructure to its own corporate IT resources and move eight e-mail environments to a corporatewide Exchange system. The group also consolidated Litton's 31 separate Internet points into three and two Litton data centers into the primary Northrop data center.

The biggest savings came from centralizing corporate buying. At Litton, each business unit purchased IT equipment without taking advantage of corporate purchasing agreements. Shelman's group negotiated new sourcing contracts based on projected volume and Northrop's accepted hardware and software standards. This not only helped leverage Northrop's buying power but also cemented which products the technical staffs would support.

Shelman says the entire organization now uses standard networks, office products, network security and routers, as well as the IBM WebSphere application integration layer. In addition, it manages suppliers, including SAP as a predominant supplier, with a corporate-level buying agreement.

"We told people, 'Here are the things you get a choice on, and here's what you use that's standard,'" Shelman says. He acknowledges that he met with a tremendous amount of resistance. "It's not easy telling someone to rip out their homegrown ERP system that they've used for decades, but you have to empathize and show people why you're doing it," he says.

Today, the cost of IT as a percentage of sales is 2.5%.



CIO, Northrop Grumman Corp.

That's down from 3% in 2000, before the Litton acquisition.

And savings aren't the only outcome. "The acquisition of a company like Litton brings more than just projects and revenue but relationships and trust that will continue to result in an increasing share of federal IT contracts," says Winn Hardin, an analyst in the aerospace and defense practice at Frost & Sullivan. "Northrop's experience in integrating large acquisitions has served it well in this case."

There are many lessons

that Shelman's group will apply to future acquisitions. One is application scaling. While products such as Exchange readily scale from 40,000 to 120,000 users, "the way we govern the infrastructure had to change several times based on the magnitude of the situation, and that was not always a linear process," Shelman says.

Second: Win over the leaders. "We found that people always align with the management directly above them," Shelman says. He actually hired a consultant to help with what he thought

was an employee-engagement issue. "But once we shored up management, the problem went away," he says.

Third, Shelman says, you can't communicate too much. "Just because you say something, doesn't mean they processed it and can articulate what you said." What might seem like resistance could simply be a lack of true understanding, he says.

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*Brundel is a freelance writer in Grand Rapids, Mich. Contact her at mary.brundel@comcast.net.*

## BEST IN CLASS

# Northrop LEARNS AND GROWS WITH IT Integration Project

BY MARY BRANDEL

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But even though the \$12 million project came in on time and \$4 million under budget, it wasn't all smooth sailing. For one thing, Litton was a big pill to swallow. The company had 26 separate IT entities supporting four businesses and 35,000 users at 64 sites.

### Northrop Grumman Corp. [www.northropgrumman.com](http://www.northropgrumman.com)

- **Business:** A \$25 billion global defense and IT company with seven business sectors that offer products and services in systems integration, defense electronics, IT, advanced aircraft, shipbuilding and space technology

- **Project champion:** Thomas W. Shelman

- **IT departments:** 23,000

- **Project payback:** IT integration annual savings of \$37 million. That figure is expected to grow to more than \$600 million over the next 10 years.

Shelman's team had to integrate three separate groups into one centrally managed shared service, migrate Litton's Active Directory infrastructure to its own corporate IT resource and move eight e-mail environments to a corporate-wide Exchange system. The group also consolidated Litton's 31 separate Internet points into three and two Litton data centers into the primary Northrop data center.

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Brundel is a freelance writer in Grand Rapids, Mich. Contact her or many other readers at [brundel@comcast.net](mailto:brundel@comcast.net).

"People thought it wasn't possible. But the team did it," says Guardian Life's Shelley McIntyre.

BY TOM R. WEISE

**W**HEN the IT department at Guardian Life Insurance Co. decided to install a new life insurance and annuity administration application in 1999, the project seemed to have all the ingredients for success.

The plan was to replace a 30-year-old legacy batch system with a new online system that would allow users to create, view and modify database tables in a real-time environment. The application, Transcend, had just been sold by its former vendor, TrilMark Technologies Inc., to Pleasanton, Calif.-based PeopleSoft Inc., and a pleasing new product road map had been laid out that would help Guardian add much-needed capabilities.

With PeopleSoft's bold commitment to an improved Transcend, Guardian decided to move ahead. It deployed the existing application temporarily, modifying it to work with its IT system until it was time to move to the revamped PeopleSoft release, says Shelley McIntyre, a second vice president of business services at the New York-based mutual life insurance company.

But then things came unraveled. PeopleSoft decided to drop its plans for an up-



date, and Guardian was left with a shaky IT strategy. The options were clear: Either stick with Transcend, which Guardian's IT department was already updating, or start over with a new product.

"That's when we realized this wasn't a temporary solution anymore, but the one that we wanted and the one we wanted to go forward with," McIntyre says.

By that time, even another application from a new vendor would have required customization work. So it made more sense to stick with what they had, McIntyre says. "It was probably the biggest challenge we

team had ever been given," she says.

In just 19 weeks, the 40-member team had to implement the system, create the software interfaces to make it all work and get the new application ready for the company's employees. The hardware and software costs totaled about \$2.2 million, not including staff time, McIntyre says. "Other people in the company named the team the No-Way Team," she says.

"People thought it wasn't possible. But the team did it."

By going it alone with a product that no longer had vendor support, Guardian's IT staff had to build its own

expertise — a strategy that had mixed potential. "You've got control over your own destiny for sure," McIntyre says. "I don't think anyone outside the company thought we could do it. But the business team and the IT team thought we had to do it."

Guardian installed the first version of the system in 1999. Since then, the IT team has phased in new features and capabilities, including the ability to conduct Web transactions. Today, about 57 brokerage firms use the updated application to sell their financial products. "It's one standard interface that all the outside broker dealers can use," McIntyre says.

One huge benefit is that the new application allows Guardian to launch financial services products in 90 days, rather than the six to nine months it took with the original software, she says. "We made a huge impact on the business, that's for sure," McIntyre says. The move has also saved 40% on back-office costs. "It was hugely successful," she says. **© 44357**

## Insurance Processing System

# Data Center Consolidation

BY LINDA ROSENBERG

**W**HEN Steve J. Bandrowczak and Darrel Waite joined DHL International Ltd. in March 2002, the two men embarked on a mission to consolidate the freight company's eight data centers sprawled throughout North America into one state-of-the-art facility in Scottsdale, Ariz.

"DHL wanted to create a seamless single offering to our customers, like a single invoice or a single Web interface," says Bandrowczak, DHL's CIO. "In order to enable that global logistics business vision, we had to consolidate our IT infrastructure, which included the data center, our network backbone and our key global applications."

The project, also helmed by Waite, who is vice president of operations, was designed to do just that. The goal was to bring together into one facility DHL's global and regional IT functions within North America, including people, computers and business systems.

And they did it, on time and under budget. The total cost of DHL's Americas Information Service consolidat-

ion program, completed in December 2002, was \$75.86 million. The project's budget was \$76.35 million.

The consolidation is currently saving DHL about \$24 million a year, and when the company consolidates the IT infrastructure of its latest acquisition, Airborne Express, into the Scottsdale facility in the second quarter of this year, the savings will be more than \$50 million annually, Bandrowczak says.

The information services center in Scottsdale completes a loop of centers circling the globe that provide round-the-clock management of the company's IT services.

The other two centers are in London and Kuala Lumpur, Malaysia. Each center manages DHL's computing and telecommunications network, DHLNet, for a nine-hour shift — eight hours of support plus a one-hour overlap to transfer control from one center to the next. The centers provide support to DHL's 60,000 employees and more than 1 million customers worldwide.

Part of the project included migrating or consolidating 103 Unix, Winnt and AS/400 servers and 1BTB of storage from the Redwood Shores, Calif., data center to the Scottsdale facility; migrating Sun Solaris systems to Scottsdale from Tempe, Ariz., and in most cases, converting them to DHL's global open-systems standard HP-UX III; and moving the mainframe, tape and print operations units from Houston to Scottsdale.

"We were predominantly open systems, but we had a large mainframe environ-

ment in Houston, we had to move," Waite says. "And we had to integrate the mainframe skills into our technical skills. Now the mainframe has become an equal part of the new Scottsdale facility and the new global environment for DHL."

Another challenge was how to capture and transfer some longtime employees' knowledge about the company's core applications, particularly when those employees had decided not to move to Scottsdale. One way was to have a "shadow approach," Waite says.

"We brought on new employees, and they shadowed the legacy employee. They got up to speed, and there was knowledge transfer," Bandrowczak says.

The move to Scottsdale benefits both DHL and its customers, says Sarish Jindal, an analyst at SJ Consulting Group Inc. in Sewickley, Pa.

"By bringing all the IT needs of DHL together, the company has a better understanding of what customers are doing, and it will have positive implications from a cost point of view and from a customer perspective," Jindal says. "In the long run, every one will come out ahead."

Donald Broughton, a transportation analyst at A.G. Edwards & Sons Inc. in St. Louis, is impressed with DHL's ability to get the project done fast and inexpensively. "That they accomplished this on time and under budget is heroic given the operational complexity of the business that this information system has been charged with managing," Broughton says. **© 44443**



Steve J. Bandrowczak, CIO at DHL International Ltd.

DHL  
International Ltd.  
[www.dhl.com](http://www.dhl.com)



BY TODD R. WEISS

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## Guardian Life Insurance Co.

[www.gic.com](http://www.gic.com)

**■ Business:** The fourth-largest mutual life insurance company in the U.S., Guardian has more than 5,500 employees and more than 2,800 financial representatives in 94 agencies. It supplies employee benefits programs to 5 million participants.

**■ Project champion:** Shelley McIntyre

**■ IT department:** 398

**■ Project payback:** New financial services products can be launched in 90 days, and back-office costs were reduced by 40%.

date, and Guardian was left with a shifty IT strategy. The options were clear: Either stick with Transcend, which Guardian's IT department was already updating, or start over with a new product.

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# Guardian

GOES IT ALONE WITH  
Insurance Processing System

# DHL REAPS MASSIVE SAVINGS IN Data Center Consolidation

BY LINDA ROSENCRANCE

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The other two centers are in London and Kuala Lumpur, Malaysia. Each center manages DHL's computing and telecommunications network, DHL Net, for a nine-hour shift — eight hours of support plus a one-hour overlap to transfer control from one center to the next. The centers provide support to DHL's 60,000 employees and more than 1 million customers worldwide.

Part of the project included migrating or consolidating 103 Unix, Windows and AS/400 servers and 18TB of storage from the Redwood Shores, Calif., data center to the Scottsdale facility; migrating Sun Solaris systems to Scottsdale from Tempe, Ariz., and in most cases, converting them to DHL's global open-systems standard HP-UX 11i; and moving the mainframe, tape and print operations units from Houston to Scottsdale.

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**DHL  
International Ltd.**  
[www.dhl.com](http://www.dhl.com)

**■ Business:** An express and logistics company, DHL had 2002 sales of \$21.6 billion. Its express service reaches 120,000 destinations in about 230 countries and territories.

**■ Project champions:**  
Steve J. Bandrowczak and Darrel Waite

**■ IT department: 4,000**

**■ Project perpétual:** The project, which cost \$75.86 million, is saving the company about \$24 million a year. That annual savings figure is expected to reach more than \$50 million later this year.



Steve J. Bandrowczak, CIO at DHL International Ltd.

## LIMITLESS LEADERS 2004 BEST IN CLASS

BY MATT HAMBLEN

**C**ONSIDERED one of the largest grid computing projects in the world, J.P. Morgan Chase Investment Bank's pioneering effort to combine seven separate financial risk management systems to share computing power is on target to lower costs while increasing flexibility and service to internal customers.

The idea was hatched back in 2000 to address cost and staffing inefficiencies in the seven systems, which were designed to help traders assess and manage financial exposures such as interest rates, equities, foreign exchange and credit derivatives known as the Compute Backbone, or CBB, the new system will eventually combine the power of about 2,000 CPUs that run on 50 midrange servers. Early this year, more than 700 CPUs were on the Compute Backbone in stripped-down blade servers, and 150 CPUs are being added each month.

According to CIO Michael J. Ashworth, the New York-based investment bank spent \$4.5 million upfront on the project, working with Platform Computing Inc. in

### J.P. Morgan Chase Investment Bank

[www.jpmorgan.com](http://www.jpmorgan.com)

■ **Business:** Provides investment banking and commercial banking products and services. Also advises on corporate strategy and structure, the raising of capital in equity and debt markets, and risk management.

■ **Project champion:** Michael J. Ashworth and Steven Neiman

■ **IT department:** 11,000

■ **Project payback:** Lower costs for hardware, reduced development and operational costs and more effective systems management resulted in \$1 million savings in 2003. Another \$5 million in savings are expected this year.

Markham, Ontario, to develop middleware that shares caching resources and provides management, queuing and scheduling.

"We are looking for infinite capacity in our compute [systems], and that's a bit of a challenge. But this gives us more progress toward that goal. It's something which is difficult to put a price on," Ashworth says.

Still, initial accounting

shows that the Compute Backbone saved the bank \$1 million in 2003, and another \$5 million in savings are expected this year. The savings come from lower costs for hardware, reduced development and operational costs, and more effective systems management, says Adrian Kunzle, co-head of architecture for investment bank technology.

The Compute Backbone is built on new metal-blade devices, which are "heavily cut-down machines with four processors and a bunch of memory," Kunzle says. Taking into account all areas of savings, the CBB has "taken easily 20% out of the compute-pcute costs," he adds.

Steven Neiman, senior information architect and one of the Compute Backbone's creators, says the grid approach allows for a linearly expandable system to reduce operational risks. For instance when an isolated server fails, "You have an ability to respond much more flexibly," he says.

In another show of flexibility, a credit-trading application was built into the system in just 10 weeks instead of the five months it would have taken before the Compute Backbone, Ashworth says. And because the CBB provides a scalable infrastructure, the investment bank will be quickly able to handle new business volume, he adds.

According to Ahmar Abus, an analyst at Grid Technology Partners in South Hadley, Mass., J.P. Morgan's Compute Backbone is probably the biggest grid computing project in the world, compared with the six others that have been publicized and are currently under way. Such projects can lower costs partly because they use inexpensive servers

# J.P. Morgan HARNESES POWER WITH Grid Computing System



BY MATT HAMBLETON

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## J.P. Morgan Chase Investment Bank

[www.jpmorgan.com](http://www.jpmorgan.com)

the Compute Backbone, which is built on standard server hardware and software. After savings on maintenance strategy and efficiency, the return of capital to equity and debt markets, and risk management.

■ Project managers: Michael J. Ashworth and Steven Neiman

### ■ IT department: X86

■ Project partners: JPMorgan Chase, Platform Computing, and Platform Computing's partners. The total cost of ownership is projected to be \$1 million savings by 2008. An other benefit is savings are expected this year.

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# Grid Computing System



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— MICHAEL J. ASHWORTH,  
CIO, J.P. Morgan Chase  
Investment Bank

that can be added one at a time, he says.

"The money you can save is huge," Abbas says.

But perhaps more than the technology itself, LP Morgan's IT managers' enlightened thinking in creating the Compute BackBone has earned Abbas' praise.

"It's a very impressive project because of the huge mind-shift away from what they were doing before," he says. "You are pooling all kinds of IT resources from all areas of the company; and

that's one huge leap."

Making the organizational shift meant overcoming skepticism from internal users who had run applications on their own dedicated servers, Ashworth says. "This was a proposed factory for high-end computing, and you were taking away the perceived flexibility that the business units think they have," he explains. "It was a lot of people to convince."

Neiman credits the creation of the CBB to bright minds at the investment

bank with roots in the academic world who were encouraged to "defend their ideas in open forums." This meant that "anybody anywhere in the bank could come up and say, 'I don't think you've thought this through.' It was a self-correcting mechanism," he says.

The team of innovators "wasn't sitting here saying, 'We want to build grid computing,'" Neiman adds. Instead, he says, "we wanted to solve the problem we were handed." ☐ 44461

Real-Time Market Interface

BY TIMOTHY MOWEN

**BY THOMAS HOPFELD**  
IN LATE 2001, San Jose-based energy producer Calpine Corp. saw an opportunity to create a set of real-time interfaces to several energy markets, with the twin goals of improving operational efficiency and gaining a competitive advantage.

The company's \$136,000 IT investment has helped generate or protect millions of dollars in revenue, proving that Calpine succeeded on both counts.

The first interface, launched in January 2002, was applied to load teleme-

Calpine Corp.

try for Calpine's industrial customers in Texas. Previously, gathering this data was cost-prohibitive. Leased-line modems and other equipment could run as high as \$12,000 per customer site and take 60 to 90 days to deploy, says Barbara Kindel, Calpine's director of operations.

So the energy firm developed an approach that allows it to view customer load data and dynamically schedule those loads through a Cellular Digital Packet Data backbone with the Electric Reliability Council of Texas Inc., the

that the system will help it save as much as \$1 billion over the next five years.

"We've implemented the first two releases of the Resolve Online infrastructure, and already we've achieved savings in excess of \$200 million systemwide," says Scott Thompson, Visa's CIO and executive leader.

The Visa Resolve Online project, now in its final stage, is a Web-enabled application used to facilitate changes to the re-engineered dispute process.

The greatest benefit of the project has been to simplify the current process by elimi-

agency that manages a major portion of the state's electric power grid. In some instances, Calpine uses spread-spectrum radio technology to "hop" to a local data site, says Darrell Scruggs, Calpine's manager of market operations and systems.

Calpine was able to reduce its implementation costs per interface to \$2,500 and slash deployment time to one or two days, says Kindred.

The top-line impact was even more impressive. The real-time interfaces helped Calpine capture several million dollars in new 2002 revenue from industrial customers in Texas and freed up electricity that could be sold to others, says Dennis Fishback, Calpine's CIO.

According to Zarko Sumic, an analyst at Meta Group Inc. in Stamford, Conn., Calpine's efforts reflect an increased need in the U.S. energy industry for wholesale market transparency. The ability to effectively exchange data

nating most paper documentation, reducing the time required to process claims.

quired to resolve disputes and eliminating unnecessary steps in the process, Thompson said.

**John S. Johnson**, president and CEO of First Bank of Louisville, says, "This Web-based tool gives member banks, merchants and customer support representatives at member banks real-time access to transaction data through secure browser screens or Visa's private IP network, known as Disney Networks."

"It evolves our back-office infrastructure into a real-time, cardholder-centric system," Thompson says.

*Avivah Luria, an analyst at*

## Web-based System

第十一章

**BY LUCAS MEARIAN**  
WHEN AN INACCURATE charge is listed on a credit card bill, it's not just the customer who sees red. Settling a disputed charge is one of the costliest components of a credit card company's business.



South Dakota - 200

With the introduction of mobile commerce, it's time to take a look at how we can make our business more accessible to our customers.



Dennis F. Kindel  
Calpine CEO

among market participants, such as Calpine, and market operators can help participants reduce scheduling and planning time from days or hours to minutes, says Sumic. It also allows the companies to optimize dispatches

to increase the payback on energy generation, he adds.

The project presented Calpine with relatively minor challenges. For the load telemetry interface effort, the biggest challenge was not knowing until Jan. 1,

2002, just how many customer sites would need interfaces, says Kindel.

Meanwhile, big electric customers in Texas were recently given the opportunity to elect to be paid to have their electricity service in-

terrupted under certain conditions, under what's known as the Loads Acting as a Resource (LAAR) program. Beginning last May, Calpine created a set of real-time interfaces to provide these services to large customers through their local retail electricity providers.

Calpine was able to deliver these services by leveraging its existing energy management system, wireless communications and field data acquisition devices and interfacing to the revenue meters and the load's Distribution Control System.

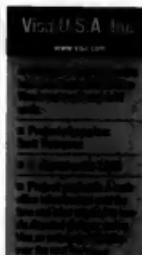
The payoff? Implementation of the LAAR service for just one customer generated a 35-fold return on investment in revenue retention alone, says Fishback.

"You don't have to spend hundreds of thousands of dollars to create a competitive advantage," says Kindel. "You can do it by thinking creatively and implementing innovative solutions." • 44356

Gartner Inc. in Stamford, Conn., says handling consumer chargebacks cost merchants as much as \$50 each. Card-issuing banks and acquiring banks (the banks that back merchants) lose as much as \$25 each. Litan says an online dispute resolution system is "one of the most time-saving, productive features" that a credit card company can implement.

"With a chargeback, [credit card companies] have to produce documentation, get back to the acquiring bank, and the acquirer has to get back to the merchant," Litan says. "Now [Visa] just puts everything in the system and everyone sees it."

Visa's original dispute res-



olution process relied heavily on paper and the postal system to communicate with cardholders. In 1999, Visa

formed a working group with card issuers and some merchants to re-engineer the exception rules, processes and systems. The Visa Resolve Online project began in November 2001, and the first version went online in June 2002.

Subsequent releases of Visa Resolve included the ability to create and transmit chargebacks, attach images and supporting documentation and transmit large volumes of images relevant to disputes.

The fourth release of the online product is expected in October and will provide access to Visa's copy request service, fraud reporting and a set of revised dispute rules. The Visa Resolve project has reduced customer service

training time, standardized information exchanged between Visa and its bank and merchant customers, improved quality control with regard to internal processes and cut the time it takes to resolve disputes.

What Visa didn't figure into the projected payback was increased customer satisfaction, which Thompson says was cited by members bank as the biggest benefit.

"It has been projected that upon full implementation of Visa Resolve Online in October 2004, disputes will be at least 20% less expensive to process," Thompson says.

"Some members believe this number to be closer to 50%." • 44631

## BEST IN CLASS

# Calpine GENERATES REVENUE WITH Real-Time Market Interface

BY THOMAS HOFFMAN

IS 15/11/2001 San Jose-based energy producer Calpine Corp. saw an opportunity to create a set of real-time interfaces to several energy markets, with the aim in mind of improving operational efficiency and gaining a competitive advantage.

The company's \$236,000 IT investment has helped generate or protect millions of dollars in revenue, proving that Calpine succeeded on both counts.

The first interface, launched in January 2002, was applied to load scheduling.

### Calpine Corp. [www.calpine.com](http://www.calpine.com)

■ **Business:** The energy producer has 89 facilities with a total capacity of about 22,000 megawatts. Another 10 facilities under construction will add 7,000 megawatts to the total.

■ **Project champion:**

Dennis Fieback

■ **IT department:** 209

■ **Project payback:**

A \$36,000 IT investment has generated millions of dollars in new and retained revenue.

try for Calpine's industrial customers in Texas. Previously, gathering this data was cost-prohibitive. Leased-line modems and other equipment could run as high as \$12,000 per customer site and take 60 to 90 days to deploy, says Barbara Kindel, Calpine's director of operations engineering services.

So the energy firm developed an approach that allows it to view customer load data and dynamically schedule these loads through a Cellular Digital Packet Data backbone with the Electric Reliability Council of Texas Inc., the

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BY LUCAS MEARIAN

WHEN AN INNOCENT charge is listed on a credit card bill, it's not just the customer who sees red. Settling a dispute over a charge is one of the costliest components of a credit card company's business.

At Visa U.S.A. Inc. in Foster City, Calif., a new back-office infrastructure will reduce the time and labor required to handle a customer-disputed charge by creating an online, automated process. The company expects

that the system will help it save as much as \$1 billion over the next five years.

"We've implemented the first two releases of the Resolve Online infrastructure, and already we've achieved savings in excess of \$300 million systemwide," says Scott Thompson, Visa's CIO and project leader.

The Visa Resolve Online project, now in its final stage, is a Web-enabled application used to facilitate changes to the re-engineered dispute process.

The greatest benefit of the project has been to simplify the current process by elimi-

nating most paper documentation, reducing the time required to resolve disputes and eliminating unnecessary steps in the process, Thompson says.

This Web-based tool gives member banks, merchants and customer support representatives at member banks real-time access to transaction data through secure browser screens or Visa's private IP network, known as Direct Exchange.

"It evolves our back-office infrastructure into a real-time, cardholder-centric system," Thompson says.

Avivah Litan, an analyst at

# Visa RESOLVES CHARGE DISPUTES WITH Web-based System



Scott Thompson, CIO  
at Visa U.S.A.



Dennis Fishback,  
Calpine's CEO

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Visa's original dispute res-

## Visa U.S.A. Inc.

[www.visa.com](http://www.visa.com)

**Business:** U.S. consumers hold an estimated \$45 million Visa-brand credit and debit cards.

**Project champion:** Scott Thompson

**IT department:** 2,600

**IT Project payback:** A back office infrastructure cuts the time and labor required to handle disputed charges, saving Visa an anticipated \$1 billion over the next five years.

olution process relied heavily on paper and the postal system to communicate with cardholders. In 1999, Visa

formed a working group with card issuers and some merchants to re-engineer the exception rules, processes and systems. The Visa Resolve Online project began in November 2001, and the first version went online in June 2002.

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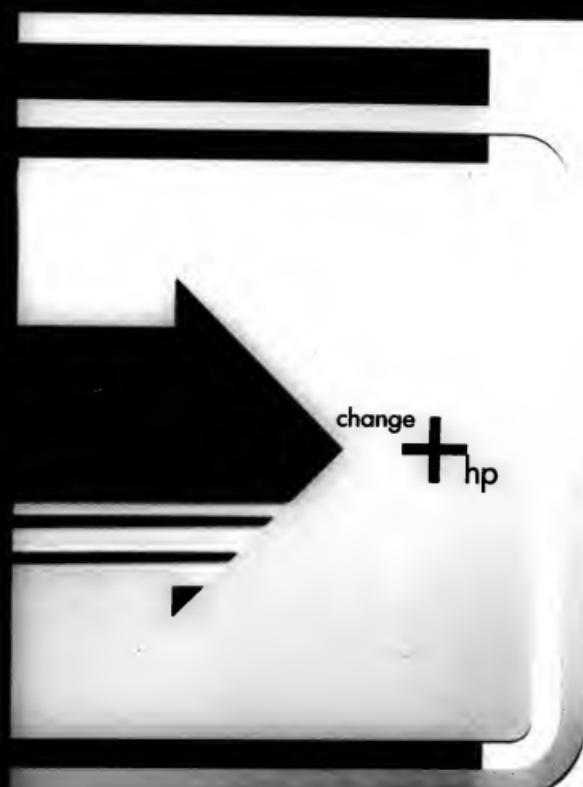
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BEST IN CLASS

# Wyndham CHECKS OUT BENEFITS OF Centralized Call-Accounting

BY DARYL M. ARTHES

**I**T'S AN UNFORTUNATE but all-too-common experience: You are checking out of a hotel and are outraged to find your bill littered with long-distance telephone charges, at \$10 to \$20 a pop. And there are about a dozen \$1 charges for local calls — one for every time you connected to the Internet. You stay at hotels in this chain often, you tell the desk clerk, and they ought to treat you better. He agrees to remove the charges, but he makes you wait while he fixes your bill.

Thanks to some innovative work by project leader Mark F. Hedley, that scenario doesn't play out anymore at

**Wyndham  
International Inc.**

[www.wyndham.com](http://www.wyndham.com)

**■ Business:** Based in Dallas, Wyndham International owns, leases, manages and franchises hotels and resorts in the U.S., Canada, Mexico, the Caribbean and Europe.

**■ Project champion:** Mark F. Hedley

**■ IT department:** 67

**■ Project purpose:** Guest call-accounting system eliminates more than 100 local telephone and is expected to produce a 200% return on investment over five years.

Wyndham hotels. Hedley, a senior vice president and chief technology officer at Wyndham International Inc. in Dallas, is the mastermind behind a chainwide centralized call-accounting system that has reduced operating costs at the company's hotels while removing a key source of customer dissatisfaction.

On a central server in Dallas that interfaces to each hotel, the new system keeps track of telephone rates that can vary by hotel, corporate customer, guest group, date or even by individual guest. A Wyndham salesperson can, for example, promise a convention group a block of rooms with a special low phone rate for the duration of their stay and be confident that the group will get that rate — automatically and transparently.

The system also recognizes Wyndham's By Request premier members and ensures that they get free long-distance and local telephone service and free high-speed Internet access. It also supports administrative functions such as call-pattern analysis and compliance with national carrier contracts.

The call-accounting system eliminated more than 100 local systems and is expected to produce a 200% return on investment over five years, not counting additional revenue it might bring from

happy guests, says Hedley.

"This is the first time in the industry this has been done, first and foremost, on a centralized basis," he says. "It used to be a tremendous overhead for a hotel to keep the rate tables up to date, to keep the equipment configured properly and so on."

"It's pretty slick," says W. Douglas Lewis, a senior partner at Edge Consulting Group LLC in Atlanta and former CEO at InterContinental Hotels Group. "It allows your frequent stayers to automatically get the charges not put on the bill. It



## Centralized Call-Accounting

BY GARY M. ANTHES

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The call-accounting system eliminated more than 100 local systems and is expected to produce a 26% return on investment over five years, not counting additional revenue it might bring from

happy guests, says Hedley. "This is the first time in the industry this has been done, first and foremost, on a centralized basis," he says. "It used to be a tremendous overhead for a hotel to keep the rate tables up to date, to keep the equipment configured properly and so on." "It's pretty slick," says W. Douglas Lewis, a senior partner at Edge Consulting Group LLC in Atlanta and former CEO at InterContinental Hotels Group. "It allows your frequent stayers to automatically get the charges not put on the bill. It



removes one of the largest dissatisfaction of hotel guests."

Lewis also praises the system's architecture. "They have managed to link their ByRequest database in with their call-accounting system and the PBXs in the hotels. That's technically very interesting," he says.

Some of the project's innovations were more prosaic. It was necessary to install a brick-size data-collection and network-interface device at every hotel, but Hedley didn't want to bear the cost of sending an IT person to each site to do that. "We

created a very extensive set of instructions, a book, on how to install the device," he says. "We had to make it so anyone could install it, but here we were asking them to touch the parts of a phone system that you generally wouldn't touch."

Senior project manager Doug Oppenheimer wrote the instructions and even photographed a Phillips screwdriver to show the installers what one looks like. "I came from a hotel before getting into IT," says Oppenheimer. "I said, 'How would someone who never saw a

computer deploy this device properly the first time?'

Oppenheimer also set up a Web site with frequently asked questions about the new system, created a training course that could be downloaded or obtained on a CD, and beta-tested everything at two hotels.

"The whole implementation of that device went seamlessly, vs. what a disaster it could have been and how much time and cost it could have added," Hedley says. "We did the entire system rollout in 90 days."

© 44360

**"**This is the first time in the industry this has been done, first and foremost, on a centralized basis. It used to be a tremendous concern for a hotel to keep the rate tables up to date, to keep the equipment configured properly and so on.

- MARK F. HEDLEY,  
senior vice president and CTO,  
Wyndham International Inc.

## Self-service Filing Portal

BY STEVE ULFELDER

In late 1997, Ohio's state legislature passed a bill ordering government agencies to streamline convoluted processes in the areas of workers' compensation, employer tax withholding and tax filing.

The legislators were admirably responding to businesses' concerns about the amount of time required for these administrative tasks. But they didn't address details such as funding and project ownership, and so Ohio House Bill 202 made little headway for two years.

When Gregory S. Jackson signed on as Ohio's CIO in 2000, he made meeting the demands of the unfunded mandate an immediate priority because, Jackson says,

he agreed with the legislature that a more user-friendly system was important for the state's employers. The resulting portal, dubbed the Ohio Business Gateway, has exceeded demands at every turn. Small and medium-size businesses use the portal's single interface to transact with the state taxation, workers' compensation, family services and administrative services agencies; the time they spend on such tasks has dropped 36%, state studies show.

Jackson concedes that painting the agencies' initial cooperation was the toughest part of the project. Gartner Inc. analyst John Kost isn't surprised. "The main currency of government isn't income or wealth. It's power," he says.



Gregory S. Jackson,  
CEO of the state govern-  
ment of Ohio

BY MARC L. RISBONI

**W**HEN network hardware maker Nortel Networks Ltd. began a major CRM initiative in 2000, the goal was to connect all customer-facing processes and, in so doing, slash support costs and boost sales.

Because Nortel had many individual business units that catered to different market segments, there were more than 25 sales and 130 customer support systems in place, some overlapping. The project was clearly inefficient: For example, it took 50 seconds for customer service agents to answer calls at peak

times, and the abandoned call rate was nearing 7%.

"Our customers were quickly becoming frustrated," says project leader and CIO Albert Hitchcock, who is based in Research Triangle Park, N.C.

The project's main goal was to have one integrated system that could handle the entire customer experience, from point of sale to product installation and support.

To do this, Nortel executives decided to consolidate the company's various legacy CRM systems into one built around Amdocs Ltd.'s Clarify software. This required a phased rollout, prioritized based on business needs and evaluated by a mixed business and IT review board. Each individual upgrade had to be financially

### Integrated CRM System

"So creating a multidepartment portal is viewed by those agencies as diminishing their power. That's going to affect their behavior."

In 2000, Jackson says, he told a group of outside consultants who were evaluating state processes that "we were having trouble getting traction" with the project. Those consultants recommended that a director from an affected agency be persuaded to own the project. "That way, it would clearly be an agency priority," Jackson says. "Not just another IT project within each agency."

At that point, Jackson got some help when Ohio Gov. Bob Taft became involved and requested that the Ohio Department of Taxation director take on sponsorship. "That was an amazing turning point," Jackson says. Not much was the project kick-started, but the ensuing dis-

**State of Ohio**  
[www.state.oh.us](http://www.state.oh.us)

- **Population:** The 34th largest state by land area in the U.S., Ohio covers 102,543 square miles. Its state motto is "Ense petit placidam sub libertate quietem."
- **Project champion:** Gregory S. Jackson
- **IT department:** 2,000
- **Project problem:** An agreement of \$10.5 million to build a Web-based transactional portal for the state agencies involved.

cussion expanded the gateway's scope. It was originally planned as a mere registration tool, but Jackson and the new sponsor agreed to make it a more ambitious transactional portal.

The next challenge was to

fund the project. Jackson carved out \$1.25 million for initial development, and in early 2002 a large-scale pilot was launched. The Ohio Business Gateway became fully functional in 2003; program director Joe Zapotsky estimates ongoing operational costs at \$1.5 million annually.

By all accounts, the gateway was an immediate smash hit. In addition to the 36% time savings enjoyed by Ohio businesses, the state itself has reduced transaction costs for the affected agencies by 42%, according to Jackson. "Ohio deserves great credit for putting this together," Gartner's Kort says.

Jackson says that if he regrets anything about the project, it's that because of time pressures, "we didn't spend as much time on the IT architecture as we might have liked to." The state made some use of Web ser-

vices, he notes, "but there wasn't a lot of time spent thinking about how [the portal] is going to play out in five years." In particular, Ohio used a Microsoft-based architecture but did the bulk of its development without exploiting the vendor's .Net.

Among the state's next projects are possibly shifting to .Net and adding an XML interface, Zapotsky says. Already, Jackson's team has expanded the Ohio Business Gateway to the local-taxation level, and the state is working with the Internal Revenue Service to allow Ohio businesses to pay federal taxes at the portal, too.

Small wonder that the portal has been widely imitated by other states.

• 44368

*Lifielder is a freelance writer in Southboro, Mass. Contact him at sulfelder@charter.net.*

justified based on its merits.

By breaking the project into parts, the IT team ultimately was able to put together a huge single instance of CRM software, says Beth Eisenfeld, an analyst at Gartner Inc. Nortel executives probably wouldn't have approved the project's final price tag, she adds, if it had been presented in one lump sum.

Ultimately, the project, which cost a total of \$30 million, came in on time and on budget and has resulted in one of the largest CRM implementations in the high-tech industry, Nortel claims.

There are 19,200 internal users on the system, along with 200,000 customers and

partners who can access the Nortel service applications.

There is now one major call center, down from three, and the number of worldwide toll-free numbers has dropped from 500, to 20. Nortel has also saved \$15 million by retiring some of its legacy systems.

The customer payback has been even bigger: Customers are now able to configure a switch, check an order, track a service ticket, access documentation online. The abandoned-call rate dropped from 7% to 2%, and the average time to answer a call dropped from 50 seconds to 14. The entire sales cycle has also shrunk, from 100 to 60 days.

The company did learn a few lessons along the way. In 2002, for example, Nortel found that it needed to create a reporting system to make sure the right people got the data appropriate for them. With business intelligence software from Business Objects SA, Nortel created a reporting system built around 14 individual data marts.

This has resulted in a rise in storage costs, up 15% annually, and the staff is now reviewing the system to ensure that only pertinent data is being extracted.

The company was moving fast to get people running on the system, but in hindsight, it should have spent more time doing some training, according to Mary Kay Wells, vice president of value chain



**Michael J. Winkler,**  
CEO of Nortel Networks  
"We needed to do it again, we'd emphasize the training," Wells says.  
• 44621



## 100 LEADERS 2004 BEST IN CLASS

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Ulfelder is a freelance writer in Southboro, Mass. Contact him at uulfelder@charter.net.

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### State of Ohio

[www.state.oh.us](http://www.state.oh.us)

- **Organization:** The 34th largest state by land area in the U.S., Ohio spans 106,103 square miles. Its state capital and largest city is Columbus.
- **Project champion:** Gregory S. Jackson
- **IT department:** 2,000
- **Project payback:** An investment of \$1.25 million for initial development has returned 35% time savings for Ohio businesses and a 42% drop in transaction costs for the state agencies involved.

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partners who can access the Nortel service applications.

There is now one major call center, down from three, and the number of worldwide toll-free numbers has dropped from 500, to 20. Nortel has also saved \$15 million by retiring some of its legacy systems.

The customer payback has been even bigger: Customers are now able to configure a switch, check an order, track a service ticket or access documentation online. The abandoned-call rate dropped from 7% to 2%, and the average time to answer a call dropped from 50 seconds to 14. The entire sales cycle has also shrunk, from 100 to 60 days.

The company did learn a few lessons along the way. In 2002, for example, Nortel found that it needed to create a reporting system to make sure the right people got the data appropriate for them. With business intelligence software from Business Objects SA, Nortel created a reporting system built around 14 individual data marts.

This has resulted in a rise in storage costs, up 15% annually, and the staff is now reviewing the system to ensure that only pertinent data is being extracted.

The company was moving fast to get people running on the system, but in hindsight, it should have spent more time doing some training, according to Mary Kay Wells, vice president of value chain

### Nortel Networks Ltd.

[www.nortelnetworks.com](http://www.nortelnetworks.com)

- **Business:** A telecommunications company that produces core switching, wireless and optical systems for telephone carriers and data service providers worldwide.

- **Project champion:** Albert Hitchcock

- **IT department:** 1,450

- **Project payback:** Nortel has saved \$15 million by retiring some of its legacy systems and has reduced its abandoned-call rate from 7% to 2%.

solutions at Nortel.

"If we needed to do it again, we'd emphasize the training," Wells says.

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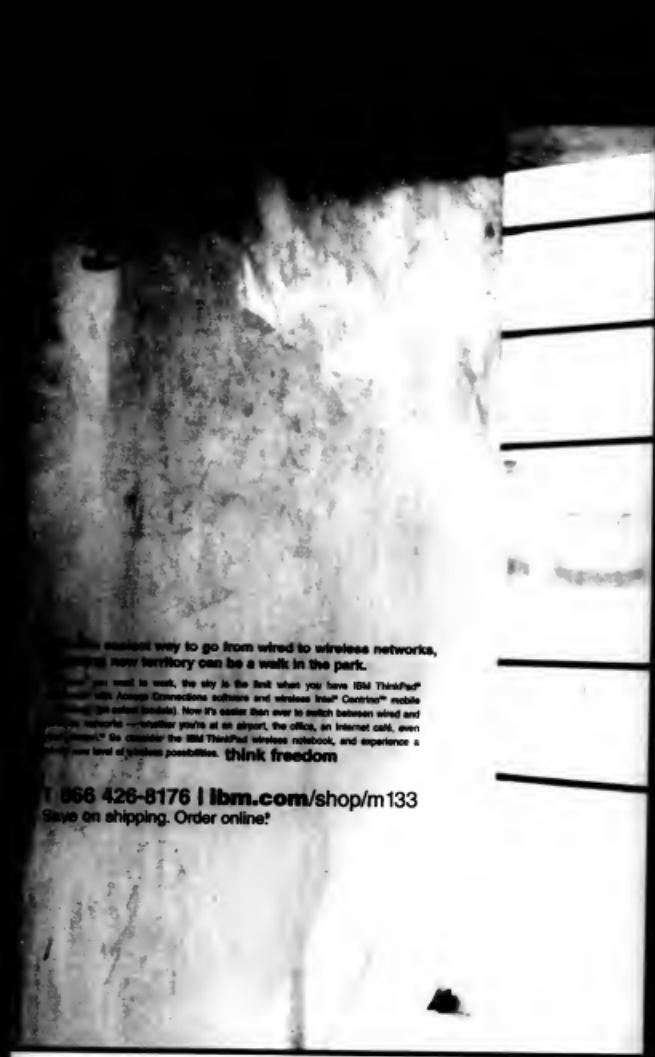


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# MANAGEMENT

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Continued from page 27

As the leader of the group, Rybeck plays a role that includes establishing and communicating data standards, ensuring data quality is maintained during database conversions and doing the logical design for the data warehouse tables. She also oversees implementation of the Group 1 Software Inc. data cleansing system and work with The Dun & Bradstreet Corp., whose database is used for company name standardization and hierarchies.

The analysts have their work cut out for them. Bringing together customer records from the 75 business units yielded a 25% duplication rate, misspellings and fields with incorrect or missing data.

"Most of the divisions would have sworn they had great processes and standards in place," Rybeck says. "But when you show them they entered the customer name 17 different ways, or someone had entered 'Loading dock open 8:00-4:00' into the address field, they realize it's not as clean as they thought."

## Multitalented

Although the data steward may report to IT — as is the case at Emerson and pharmaceuticals company Sanofi-Synthelabo Inc. — it's not a job for someone steeped in technical knowledge. Yet it's not right for a business person who's a technophobe, either.

You need someone who's familiar with both disciplines, like Seth Cohen. The first data quality control supervisor at Sanofi in New York, Cohen was hired a year ago to help design automated processes to ensure the data quality of the customer knowledge base that Sanofi was beginning to build.

Cohen has enough technical skills to be able to spot out a data-cleansing system and then work with a developer to make sure that the system is written correctly.

But having worked in the pharmaceuticals field for three and a half years, he also knows the industry's specific business rules and understands the most important data concerns that must be addressed during the requirements gathering stage.

Data stewards should have business knowledge because they need to make judgment calls, Cohen says. With both a data warehouse, for instance, if the system expects to get numbers in a field and gets a string of letters instead, Cohen must decide what's wrong and how to correct it.

Mary Pickett is another data steward who has a mix of skills. When she joined Winston & Strawn LLP, a law firm in Chicago, she considered herself a database specialist. Today, however, her title is "marketing application specialist," and one of her primary duties is to ensure the quality of Winston & Strawn's contact database.

"Especially in this company with people moving around, it's a highly charged, dynamic database that keeps changing," Pickett says. "If it sits for a month, it's dirty again."

Pickett prefers to train business users within the company to keep the data clean. Likely candidates include paralegals or secretaries who manage contact lists for their practice groups. Still, she says, it takes a solid year for data clerks like them to gain the necessary experience to move up to data coordinator.

The reason: They need to learn not only how to sort through duplicate

company names, make sure contact names are associated with companies and use the database's cleansing tools, but also how to prioritize which clients are the most important to work on. "We want to keep our top clients as clean as possible," Pickett says.

## Perfection Unattainable

Indeed, judgment is a big part of the data steward's job — including the ability to determine where you don't need 100% perfection.

At OneSource Information Services, a provider of business information products in Concord, Mass., orientation sessions include a speech on the inevitable dirtiness of data. But at the same time, says Beth Jancarus, director of content management at OneSource, the company "lives and dies by data quality." So where do you draw the line? That's where data stewards come in, deciding what's "clean enough."

Cohen says that task is one of the highest challenges of the job. "100% accuracy is just not achievable," he says. "Some things you're just going to have to let go or you'd have a data warehouse with [only] 15 to 20 records."

A good example is when Sanofi purchases data on doctors that includes their birth dates, Cohen says. If a birth date is given as Feb. 31 or the number of the month is listed as 13 but the rest of the date is good, do you throw out all of the data or just figure the birth date isn't all that important?

It comes down to knowing how much it costs to fix the data vs. the payback. "You can pay millions of dollars a year to get it perfect, but if the returns are in the hundreds of thousands, is it worth it?" asks Chuck Kelley, senior advisory consultant at Navigator Systems Inc., a corporate performance management consultancy in Addison, Texas.

## Good Diplomats

Data stewards also need to be politically astute, diplomatic and good at conflict resolution. In part because the relationships aren't always friendly. When Cohen joined Sanofi, some questioned why he was there. In particular, IT didn't see why he was "causing so many headaches and adding several extra steps to the process," he says.

There are also political traps, as well. Take the issue of defining "customer address." If data comes from a variety of sources, you're likely to get different types of coding schemes. "Everyone thinks theirs is the best approach, and you need someone to facil-

## Resume of a Data Steward

Here's the career path of **Nancy J. Rybeck**, data administrator at Emerson Process Management:



**MAY 2000 - PRESENT**  
Emerson Process Management:  
Data warehouse architect, project manager, data administrator

**OCTOBER 1997 - MAY 2000**  
McLane Company Inc.:  
Data administrator

**1985 - 1997**  
Texas Association of School Boards:  
Senior technician, assistant director of MIS/Information engineering, assistant director of data services/application development, manager of systems and program mining, programmer/analyst

**1980 - 1985**  
CarteMedics Inc.:  
programmer/analyst

**EDUCATION:**  
Bachelor of arts degree in computer science, St. Edward's University, Austin

itate," says Robert Seiner, president and principal of KHK Consulting & Educational Services in Pittsburgh.

People may also argue about how data should be produced, he says. Should field representatives enter it from their laptops? Or should it first be independently checked for quality? Should it be uploaded hourly or weekly? If you have to deal with issues like that, you're argumentative and confrontational, that would indicate you're not an appropriate steward," Seiner says.

Most of all, data stewards need to understand that data quality is a journey, not a destination. "It's not a one-shot deal — it's ongoing," Rybeck says. "You can't quit after the first task."

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Brundel is a freelance writer in Grand Rapids, Mich. Contact her at [mari.brundel@comcast.net](mailto:mari.brundel@comcast.net).

### BATA STEWARDS AT A GLANCE

#### Responsibilities

- Create business naming standards
- Standardize entity definitions
- Standardize attribute definitions
- Specify business rules
- Standardize calculation and summarization definitions
- Create entity and attribute aliases
- Conduct data quality analyses
- Manage sources of data for the data warehouse
- Specify data security
- Develop data-retention criteria

#### Nontechnical Skills Required

- Solid understanding of the business
- Excellent communication skills
- Objectivity
- Creativity
- Diplomacy
- Ability and willingness to work as part of a team
- Well-respected knowledge of the overall area
- Well-respected knowledge of the overall corporation



# MANAGEMENT

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Continued from page 27

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McLane Company Inc.

Data administrator

Texas Association of School Boards  
Senior technical consultant, based  
in Dallas. Michael is a former  
senior assistant director of data  
services/operations development  
manager of systems and program  
management, programmer-analyst

CardioMedics Inc.  
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### DATA STEWARDS AT A GLANCE

**Sanofi-Synthelabo Inc.** Seth Cohen, data quality control supervisor, New York City. Cohen oversees a team of 10 data quality control analysts who are responsible for maintaining data quality across the organization. He has a background in pharmaceuticals and law.

**Emerson Process Management**

Nancy J. Rybeck, data administrator, Boston. Rybeck oversees a team of 10 data quality control analysts who are responsible for maintaining data quality across the organization. She has a background in pharmaceuticals and law.

**OneSource Information Services Inc.** Beth Jaccus, director of content management, Cottontown, Mass. Jaccus oversees a team of 10 data quality control analysts who are responsible for maintaining data quality across the organization. She has a background in pharmaceuticals and law.

**Navigator Systems Inc.** Chuck Kelley, senior advisory consultant, Addison, Texas. Kelley oversees a team of 10 data quality control analysts who are responsible for maintaining data quality across the organization. He has a background in pharmaceuticals and law.

## BRIEFS

**Emerson Taps CIO From Invensys**

Emerson Electric Co. in St. Louis recently named Stephen C. Hassell as CIO. He will be responsible for customer-focused IT programs, including telecommunications, applications and heating for the electrical products company. Hassell previously was CIO at London-based Invensys PLC.

**Briggs & Stratton Expands AT&T Deal**

Briggs & Stratton Corp., which makes engines for outdoor power equipment, awarded AT&T Corp. a multimillion-dollar global networking contract. The contract renews an existing deal for long-distance, Internet, teleconferencing and domestic data services. It also adds AT&T managed international data services and increased networking capacity.

**Reader's Digest Outsources Big Iron**

The Reader's Digest Association Inc. in Pleasantville, N.Y., recently confirmed that it has signed a long-term agreement to outsource mainframe operations to Infotracing Inc. in Lodi, N.J. Infotracing has already taken over Reader's Digest's data center operations and is planning a June migration of the mainframe computing infrastructure to Infotracing's data center.

**Digital River Hosts Online Toy Store**

Minneapolis-based Manhattan Group LLC, known as Manhattan Toy, last week launched an online toy store built and hosted by e-commerce outsourcing firm Digital River Inc. Eden Prairie, Minn.-based Digital River not only hosts the specialty retailer's site ([www.manhattantoy.com](http://www.manhattantoy.com)), but also provides order management, product fulfillment, customer service, e-marketing and fraud-prevention screening.

BARBARA GOMOLSKI

# Going Beyond Strategic Platitudes

**C**ONVENTIONAL WISDOM says that if you're looking to develop an IT strategy, you start with the business strategy and go from there. On the surface this makes sense, but it almost never works. Business strategies are often vague and downright meaningless. Browse a handful of annual reports, and you'll see what I mean. Strategic goals like "product excellence," "increased shareholder value," "growth through acquisition" and "improved customer satisfaction" don't say much about what's in store for the company from a business perspective, let alone what the IT organization should do.

To create a good IT strategy, IT leaders have to rethink the whole concept of strategy development. Most IT professionals are introduced to the concept of strategic planning by business people, who devise their plans by looking at the marketplace. Business people consider which markets the company will compete in, which products and services they will sell and how they will execute on those plans. That's great, but it's very different from the way good IT leaders develop strategy.

Let's assume that a company has the best strategic business planners in the world. These business planners have scanned the market and have developed a fully fleshed-out plan to build and sell products. They even have an excellent operational plan. Even in this unlikely scenario, the business strategy probably won't tell the IT leaders exactly what they need to focus on.

Recognizing this, the IT leadership corners the business people and tries to "extract" more information from



them in order to develop an IT strategy. This doesn't work, either, because the business people don't fully understand the IT implications of their business plans. If they did, they might out need a CIO!

**A Better Way**

While developing an IT strategy is difficult, it's worth doing. Instead of looking at high-level business strategies for guidance, IT leaders should be gathering

information about key areas of the business in order to determine their strategy. For example, looking at the following areas will tell you more about what's in store for IT than those business-plan platitudes:

**Geographic expansion and corporate virtualization.** Consider how far the IT organization will have to extend itself in the coming year. Is the company moving into new geographies? If so, how? Also, look at how IT will have to change or evolve to support an increasingly virtual enterprise. Consider the needs and issues that remote em-

ployees and disconnected business partners will present to IT.

**Governance and compliance.** How is the company planning to make key decisions in the future? With a renewed focus on corporate governance, IT decision-making is evolving in many companies. These changes will affect the kinds of IT initiatives that are funded in the coming years. Also consider how compliance with the latest regulatory requirements will influence IT priorities.

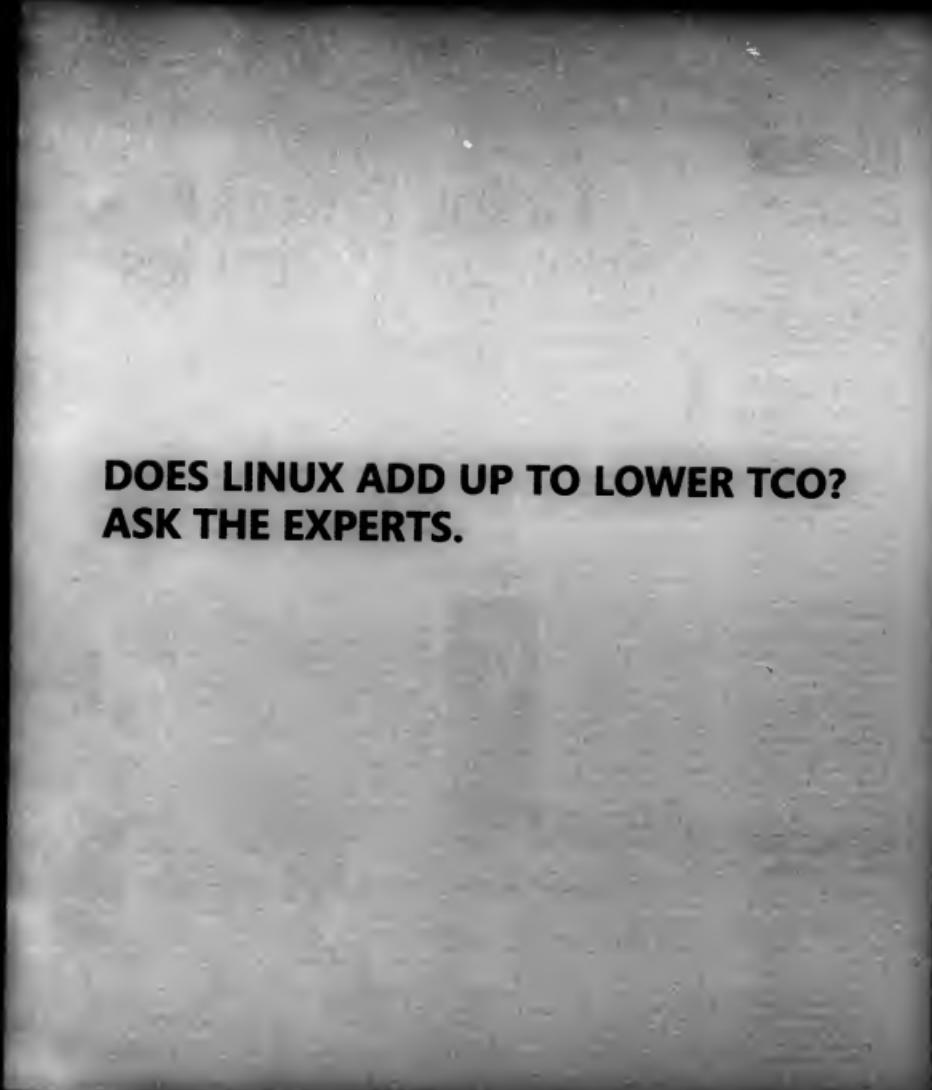
**Future of the business.** How is the business evolving? A company that's changing from being a manufacturer to being a marketing company is going to see a major shift in its IT priorities. Consider what the IT road map might look like as the business undergoes its transformation. This is also a good time to look at how customer needs are changing and how those changing needs will affect IT.

**Business attitude toward IT spending.** For the past two years, most companies have been in a cost-cutting mode regarding IT, which has had a significant effect on IT strategies. As the economy improves, consider how business leaders' attitudes toward spending money on IT will also change. Consider whether the willingness to invest in IT will keep pace with or lag the economic recovery.

These are some of the main issues to consider when developing an IT strategy, but it's not an exhaustive list. IT leaders will still need the help of business executives to develop an IT road map. But they shouldn't expect the business strategy to miraculously lead them to an IT strategic plan. © 44083

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**DOES LINUX ADD UP TO LOWER TCO?  
ASK THE EXPERTS.**

**Microsoft**

*"Although the Linux OS itself is nominally free, Linux is only one component of an increasingly complex application infrastructure stack... From a total-cost-of-ownership perspective, we believe the overall application costs of integration and ongoing infrastructure management and support far outweigh one-time, upfront hardware and OS software costs."*

*—META Group, November 2002  
Linux Servers: No "Silver Bullet" for Total Cost of Ownership*

Leading independent research analyst META Group found in a recent study that Linux on Intel infrastructure costs are **not lower than Windows® on Intel**. To get the full study and other third-party findings, visit [microsoft.com/getthefacts](http://microsoft.com/getthefacts)

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FREE NETWORK  
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Help the CEO 'CYA'**

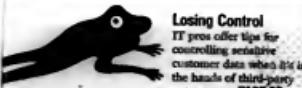
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or by calling 1-877-732-8780.

# KNOWLEDGE CENTER PRIVACY

03.15.04

## Privacy Potholes

IT managers like Nationwide Mutual's Kirk Herath (left) offer advice for avoiding process and technology potholes when complying with privacy regulations. [PAGE 36](#)



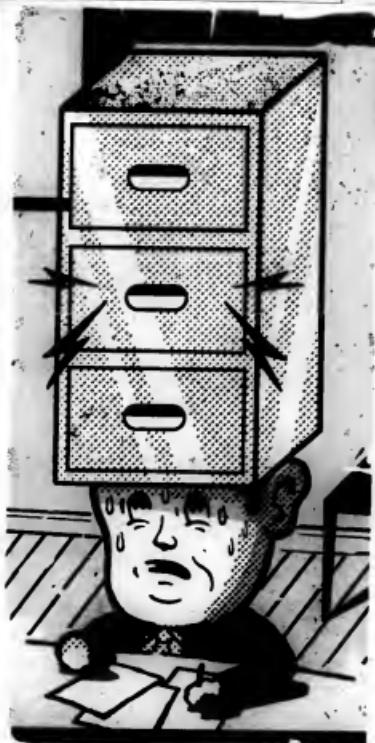
## Losing Control

IT pros offer tips for controlling sensitive customer data when it's in the hands of third-party outsourcers. [PAGE 30](#)

## OPINION

### RFID Privacy Scare Is Overblown

COLUMNIST JAY CLINE says the RFID community needs to counteract the public hysteria about possible privacy abuses. [PAGE 44](#)



# Compliance Headaches

## SPECIAL REPORT

A patchwork of inconsistent and vague laws make it tough for IT to do the right thing.

## EDITOR'S NOTE

**I** ADMIT IT: I was a policy wonk. As this newspaper's Washington correspondent many years ago, I covered literally hundreds of congressional hearings — many of them about privacy. I had my nose in the fine print of the *Federal Register* and the *Congressional Record*. I huddled with anonymous congressional staffers to get the latest markup drafts of bills in subcommittee. I used to be able to quote key passages from my dog-eared copies of the Computer Fraud and Abuse Act and the Electronic Communications Privacy Act. I sat in the Capitol galleries and watched votes for landmark legislation.

And I was naive. I thought that the young staff attorneys drafting the legislation knew what was best for the country. I scoffed at industry complaints about various provisions

being too hard to implement. Businesses also feared a hodgepodge of privacy laws across the 50 states, but I was skeptical of arguments for federal preemption of state privacy laws.

Older and wiser now, I know that those inconsistent and vague laws can make it tough for IT managers to comply even when they truly want to. The best intentions of those young staff attorneys can cause serious headaches for business folks outside the Capital Beltway, as the first story in this special report shows.

I still think policy-makers do the best they can when they write the laws. But I've learned that the law of unintended consequences is the most powerful law of all. © 45078

Mitch Betta is Computerworld's Features editor. Contact him at [mitch\\_betta@computerworld.com](mailto:mitch_betta@computerworld.com).

## KNOWLEDGE CENTER PRIVACY

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**C**OMPANIES WORKING hard to comply with a bewildering array of fast-changing state, federal, international and industry-specific privacy rules are uncovering a variety of practical problems along the way.

Rising concerns over personal privacy and data-sharing practices have focused on increased liability risks related to how personal data is handled. At the same time, the trend toward extending the enterprise is making it harder than ever for companies to keep track of and protect such data.

IT managers dealing with these privacy regulations offer their best advice for avoiding the technology and process potholes.

### POTHOLE: Patchwork of Laws

The sheer number of privacy regulations and new mandates coming down the pike make privacy compliance a huge challenge, says Kirk Herath, chief privacy officer at Nationwide Mutual Insurance Co.

Some of the biggest drivers include the Health Insurance Portability and Accountability Act, the Gramm-Leach-Bliley Act, the Sarbanes-Oxley Act and California's SB 1386 identity protection bill. On the horizon are other state and federal versions of SB 1386. Several states — most notably California — have their own privacy laws. International rules, such as those covering European Union nations and Canada, are also forcing U.S. companies to confront privacy issues.

"Over the past two years, we've had

over 1,000 new privacy laws that have affected us," says Joel Tietz, chief privacy officer at AXA Financial Services LLC in New York.

**SIDESTEP:** Instead of trying to craft policies for every single law, it's often better to try to comply with the requirements of the most stringent laws where possible, privacy experts say. Don't shoot for meeting the minimum requirements, Tietz adds. "We took the best of what we saw in all of the various requirements," he says. The company then crafted a policy to meet those standards.

### POTHOLE: Complex Requirements

Writing a standard privacy notice that encapsulates all regulatory and legal requirements can be a huge challenge, Herath says. Privacy notices, which are required in every state, spell out a company's policies for handling personal data. Several laws require companies to clearly articulate what they can or can't do with confidential information. But differing requirements make it hard to draft a standard policy, Herath says.

For instance, at least 17 states still use privacy provisions from a 1982 information practices act that requires insurance companies to use specific phrases — related to how information might be shared for law enforcement purposes, for example — when crafting a privacy policy.

Much of the language contained in such laws is written at a college reading level. "Yet you have to economize on your language and the complexity

of what you are saying" to get the notice down to a ninth-grade reading level to meet some state requirements, says Herath. For instance, "instead of talking about how we can share information for law enforcement and anti-fraud purposes, you boil it down to 'as required by law,'" he says. Similarly, some states require that companies include opt-in policies in their privacy statements. Opt-in policies require companies to seek and receive a

user's permission to collect and use personal data.

**SIDESTEP:** Here again, Herath suggests making the policy as broadly applicable as possible. Start with the most stringent requirements first and draft a policy statement written for those requirements.

"It can be done, but not easily," says Herath. Drafting a solid policy can take several weeks to several months and

Putting privacy legislation into practice means learning how to sidestep legal and technical problems. By Jaikumar Vijayan

# Privacy Potholes

# KNOWLEDGE CENTER PRIVACY

COMPUTERWORLD March 15, 2004

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requires input from business units as well as legal and compliance teams, says Herath, who manages 35 such notices for Columbus, Ohio-based Nationwide's business units.

## POTHOLE: Far-flung Data

But it's not enough to say what you'll do. You also need to do what you say. And that means putting in place the technology and processes to monitor and ensure compliance with stated privacy policies, experts say.

"The biggest issue facing corporations with respect to privacy is establishing control over all their data," says Arshad Noor, CEO of StrongAuth Inc., a Cupertino, Calif.-based identification management firm.

This data includes not only what's on production systems and backup servers and sites, but also everything stored on distributed client systems and flowing across enterprise and partner networks, he says.

**SIDESTEP:** To gain control, says Noor, companies must establish a detailed inventory of all sensitive data everywhere in the corporation, review all controls relating to the use of that data and set up controls and procedures to protect the data.

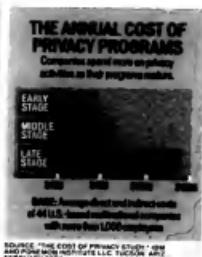
All of this will require capital expense, potentially hiring new people and buying new tools," he says.

## POTHOLE: Honoring Customer Preferences

Technology advancements have made it easier for companies to use and manipulate customer data, but that also makes it imperative to monitor and ensure privacy compliance, says Tietz.

For example, because AXA's CRM systems allow it to mine customer data, the company has to be careful that the information isn't being combined or shared in a manner that doesn't gel with a customer's privacy preferences, Tietz says.

"I view technology as one of my



backstops to ensure that data is not flowing in an inappropriate manner," he says.

**SIDESTEP:** AXA has built a database that consolidates customer information from multiple applications and production systems. Each customer record in the database has an embedded "privacy indicator" that describes in detail that customer's privacy preferences. The database is linked to every legacy application at AXA. The goal is to make sure that a customer's privacy preferences are always respected, regardless of which application is accessing the customer data, Tietz says.

"Many departments are charged with using customer information to make a profit for the company," Tietz says. "An aggressive use of such information may be beneficial to the bottom line but must always be weighted against privacy needs."

AXA, which manages more than \$450 billion in assets, also uses a Web monitoring tool to ensure that the information on its Web pages and its use of cookies are compliant with the company's stated privacy policy, Tietz says.

## POTHOLE:

### Vague Language

The lack of legal precedent and implementation guidelines poses a problem for companies trying to figure out the best way to mitigate exposure to legal risk, says Erin Kenneally, a forensic analyst at the San Diego Supercomputer Center at the University of California, San Diego.

Privacy laws such as Gramm-Leach-Bliley and SB 1386 merely specify what is expected of companies from a regulatory standpoint without explaining what they need to do from an implementation standpoint, Kenneally says.

"I see it as a combination of semantic differences between the legal and policy folks who write the laws and the techies who have to implement them. It becomes an issue of extrapolating technical solutions from abstract ideas and words," Kenneally says.

Examples of such vagueness abound. California's SB 1386 requires companies to "encrypt" data, but it doesn't specify the level of encryption required. Similarly, the law requires companies to inform customers of any "unauthorized access" to their data but doesn't define what constitutes unauthorized access.

As a result, companies may decide to "just do the very minimum and comply with the letter of the law, while in practicality [that doesn't] really provide the protection that the spirit of the law was meant to address," Kenneally says. "It is entirely conceivable that a civil or a criminal claim under SB 1386 could be raised if minimal, almost ineffectual measures are used."

**SIDESTEP:** The key, again, is to take the high road. The best way to demonstrate due diligence is to comply with the requirements of the most stringent law that's applicable to you, Kenneally advises.

## POTHOLE: Uncontrolled Partners

Programs for monitoring the privacy habits of your vendors, business partners and supply chain companies are also needed, says Herath. It's crucial to realize that a company owning the data is responsible for it even if a security breach is associated with a partner, he says.

"As we use more third parties, vetting them and the contracts they sign

becomes more important and more difficult," Herath says.

**SIDESTEP:** Nationwide has implemented a few third-party monitoring and compliance measures to address the problem.

All companies doing business with Nationwide have to fill in a Web-based self-assessment form that allows the insurer to quickly gauge the strength of its partners' privacy practices and sort them into separate risk categories. Depending on the sensitivity of the information being handled, Nationwide might ask a company to implement stronger privacy policies. Each company also needs to submit to regular privacy audits.

When it comes to partners that are based offshore, Nationwide has instituted "deeper due diligence and security," Herath says. This includes posting Nationwide's own security personnel at an offshore location to ensure that "people don't leave with things that are not supposed to leave with," he adds.

This level of physical security is especially a concern at a time when technology has made it possible for users to store vast amounts of data on storage devices get smaller, Herath says. "A few years ago, you would need a truck to take it away. Today, all a user needs is a key fob," he says. **45101**

## THE POWER OF PRIVACY

Legal requirements and corporate concerns about their reputations are pushing the need for holistic privacy programs, users say.

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## The Mosaic Effect

**DATA ELEMENTS** that in isolation look relatively innocuous can amount to a privacy breach when combined, warn Elizabeth Gorrie, privacy officer at the e-Government Office at the County of Santa Clara, Calif.

In the intelligence community, that's known as the "mosaic effect" – when combinations of data fields produce a picture that isn't apparent from the individual pieces.

As the delivery arm of a number of state and federal programs, the county collects and maintains an enormous amount of data on individuals, including

information about their medical and mental health histories, criminal records, demographic profiles and welfare benefits. "The kind of information we gather and maintain leads us to be especially concerned about privacy," says Satish Amane, the county's CIO.

To ensure better privacy protection, the county has launched a major data classification project. Its goal is to locate and classify every bit of confidential information it manages in order to get a better handle on what's critical to privacy and what's not, Amane says.

– Jeffmarie Viegas



# KNOWLEDGE CENTER PRIVACY

COMPUTERWORLD March 13, 2004

requires input from business units as well as legal and compliance teams, says Herath, who manages 35 such notices for Columbus, Ohio-based Nationwide's business units.

## POTHOLE: Far-flung Data

But it's not enough to say who you'll do. You also need to do what you say. And that means putting in place the technology and processes to monitor and ensure compliance with stated privacy policies, experts say.

"The biggest issue facing corporations with respect to privacy is establishing control over all their data," says Arshad Noor, CEO of StrongAuth Inc., a Cupertino, Calif.-based identification management firm.

This data includes not only what's on production systems and backup servers and sites, but also everything stored on distributed client systems and flowing across enterprise and partner networks, he says.

**SIDESTEP:** To gain control, says Noor, companies must establish a detailed inventory of all sensitive data everywhere in the corporation, review all controls relating to the use of that data and set up controls and procedures to protect the data.

"All of this will require capital expense, potentially hiring new people and buying new tools," he says.

## POTHOLE: Honoring Customer Preferences

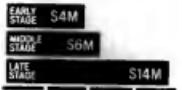
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## THE ANNUAL COST OF PRIVACY PROGRAMS

Companies spend more on privacy activities as their programs mature.



BASE: Average direct and indirect costs of 441 U.S.-based multinational companies with more than 1,000 employees.

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## THE POWER OF PRIVACY

Legal requirements and corporate citizens' concerns about their reputations are pushing the need for holistic privacy programs, users say.

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- Jayakumar Visayan

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# Losing Control

How do you protect sensitive data when it's in the hands of a third party? By Stacy Collett

**A** WOMAN IN PAKISTAN recently struck fear among IT executives who outsource. She had obtained sensitive patient documents from the University of California, San Francisco, Medical Center through a medical transcription subcontractor that she worked for, and she threatened to post the files on the Internet unless she was paid more money.

The story didn't sit well with John Golden, CIO at CNA Financial Corp., a \$12.3 billion insurance company in Chicago that outsources a small portion of its billing functions to India. Golden's team implemented a slew of physical, technical and contractual security precautions to protect customer data, such as sending only necessary bits of customer information, backing up files in a centralized server at the home office and putting tough restrictions on employee turnover at the outsourcing facility. But there's always a horror story to make him wonder.

"I wish I could say we have the security issue licked," Golden says. "We haven't had any security breaches to our knowledge in this space" since CNA began outsourcing its billing

function a year ago. But with the growing number of sophisticated hackers, terrorist threats and old-fashioned opportunists, the threat of a security breach looms daily.

The outsourcing train has left the station with many top financial, health care, tax reporting and credit reporting companies on board. The business

### How to Keep Data Safe

- # **Find the outsourcing firm.**
- # **Require the outsourcing vendor to provide proof of a security audit by a reputable third party or industry group.**
- # **Conduct a security vulnerability scan to determine what information you can extract from the outside.**
- # **Provide only partial information about a customer – not the full profile.**
- # **Put subcontracting India into the contract.**
- # **Never give the customer India a key to an employee turnover or the contract.**
- # **Ask the outsourcing vendor to provide a paperless clean-room environment.**
- # **Keep the centralized database at your home office, not overseas.**

process outsourcing market in India alone is expected to grow 54% to \$3.6 billion by the end of this quarter, according to the National Association of Software and Services Companies, a New Delhi-based organization made up of 80 Indian IT and outsourcing companies.

Industry observers warn that if outsourcing isn't done thoughtfully, with proper security controls beyond the encrypted domain level, companies will have their own horror stories to tell. Here are their tips on controlling data that's in the hands of a third party:

#### Ask to See a Security Audit

"If you're handling financial data or health data, you are required by law to have an information security plan that has administrative, technical and physical steps taken to safeguard the data — even less sensitive customer consumer data," says Becky Burr, an attorney and member of the International Association of Privacy Professionals in Philadelphia.

Though the requirement is broad and doesn't point to one particular standard, Kelly Kavanagh, an analyst at Gartner Inc., says outsourcing vendors should provide evidence that they have undergone a security audit by a reputable third party, such as a Big Four accounting firm.

Audits using standards provided by a government agency such as the National Institute of Standards and Technology's Statement of Auditing Standards 70 form also provide protection. But many outsourcing firms balk at the high cost of those audits — some run to six figures — and choose less expensive documentation.

Some outsourcing vendors conduct audits against vertical industry standards. Health care companies should seek an audit related to Health Insurance Portability and Accountability Act (HIPAA) regulations. CIOs in the financial services industry can look for audit guidelines under the Gramm-Leach-Bliley Act.

#### Set Up a Clean Room

Some facilities handling sensitive data require a clean-room environment to keep information from literally walking out the door.

Peter Bendor-Samuel, CEO of The Everest Group, an outsourcing consulting firm in Dallas, describes a standard clean room: "All the machines and output devices except for terminals are disabled. You can't copy, can't use a hard drive or a PDA to get information out of there. Their servers reside back

in the U.S. So there's no way to get data out of there."

What's more, employees are physically searched when entering and leaving. "These are extraordinary precautions," says Bendor-Samuel, and they might not be for every company.

#### Limit Access to Data

At CNA, all workers enter the centralized server through CNA's intranet, where they can also view links to CNA's methods and procedures and to the company's chat site. To handle its growing outsourcing needs, CNA in April will roll out a companywide portal that will restrict access based on user identity. A customized screen will pop up at the outsourcing facility with only a few options.

Once offshore workers have access to the server, CNA limits the amount of client information they can see. "If we're trying to verify that a customer is a good credit risk, we don't have to send all parts of the application, just [those] required to approve the application," Golden says.

#### Know Your Workers

No matter how many safety precautions are taken, it's hard to stop the opportunist who steals data for money or revenge. James "Zek" Zecoli, CIO at LifeCare Management Services LLC, says the best way to keep his company's outsourced medical transcription records safe is to know the outsourcing workers and make sure they're trained properly about procedures and legal consequences.

"We do that through training, agreements and contracts," says Zecoli. LifeCare, a Plano, Texas-based operator of 20 long-term-care hospitals in nine states, outsources 400,000 lines of medical transcription data each month to Affiliated Computer Services Inc. in Dallas. Transcriptionists have HIPAA training and know the rules and regulations required to maintain compliance with privacy standards.

Zecoli and Golden also recommend sending people to visit outsourcing sites regularly to meet employees and monitor employee turnover and subcontracting activities. • 44721

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#### PRIVACY PERILS

Outsourcing jobs to offshore destinations can sharply increase data privacy risks and the complexity of managing that risk, experts say.

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# CPOs: Hot or Not?

All the rage in the boom years, chief privacy officers lost traction with the downturn. New privacy regulations are restoring their clout. By Steve Ulfelder

**I**N 1999 AND 2000, a new title made its way into many executive suites: chief privacy officer. Reaction was mixed. Some CIOs and analysts welcomed the concept of a corporate privacy czar, while skeptics viewed the CPO moniker as public relations gloss whose sole function was to assuage consumers' privacy fears.

The economic downturn of 2000-03 brought the CPO trend to an inglorious halt. "Over the last few years, the economy made it hard to bring in people except in industries where CPOs were mandated," says Herman Collins, CEO of Privacy Leaders, a Las

Vegas-based executive search firm that focuses on privacy professionals.

But the worm has turned. The economy is percolating, hiring bans are easing — and U.S. companies face an imposing array of privacy-related regulations, including the Health Insurance Portability and Accountability Act (HIPAA) and the Gramm-Leach-Bliley Act.

Against this changing backdrop, it's time to check in on the status of CPOs.

### Regulatory Surprise

According to corporate privacy experts, federal regulations such as HIPAA, the Sarbanes-Oxley Act, the Fair Credit Reporting Act and Gramm-Leach-Bliley are affecting enterprises in significant, but perhaps counterintuitive, ways. Far from creating a second CPO boom, these regulations may actually be splitting privacy measures between two camps:

- Those in the "CPO Classic" camp advocate hiring genuine corporate officers charged with proactively considering the ethical, competitive and strategic implications of privacy.

- The "Compliance Is King" camp is narrowly focused on meeting the letter of the various federal, industry and state privacy regulations.

There is widespread agreement, especially among disappointed CPO Classic advocates, that the explosion of privacy regulations, combined with limited resources, has produced heavy emphasis on compliance. "Most companies have shifted from a privacy approach that would be based on proactive steps, competitive-edge orientation and customer trust building to a narrow legal-compliance priority," says Alan F. Westin, president of the Hackensack, NJ-based nonprofit organization Privacy & American Business. "This shift powers to the legal folks ... and away from CPOs, and it also leads companies to spend eight dollars on outside legal counsel, again, for narrow law compliance."

Richard Purcell, CEO of Corporate Privacy Group, a Seattle consulting firm, agrees. Purcell pushed for creation of the CPO position at Microsoft Corp. and served as that vendor's first CPO from 2000 until early 2003.

"Unfortunately, the response to [regulations like] HIPAA has been to make privacy officer a compliance job, not proactive or strategic," Purcell says. "I'd argue that that's in conflict with the initial focus, which was more entrepreneurial."

A perfect example of compliance-driven privacy measures in the HIPAA mandate is any health-care-related business name a privacy officer. That includes major hospital chains, but also "a seven-person dental office," Purcell says. Thus the roster of CPOs is growing (see chart), but it's hard to see how the new titles, which in thousands of small medical offices is likely to be awarded to an already overworked assistant — will advance the cause.

Membership in the leading CPO group, the Philadelphia-based International Association of Privacy Professionals, is about 1,000. Because of mergers

among privacy groups, apples-to-apples comparisons are difficult to come by, but Westin says the growth in strategic CPOs plateaued in 2003; he believes that there are about 2,000 CPOs in the U.S. but that most of those are sops to HIPAA compliance.

Still, the CPO field isn't without beat batters: Privacy Leadership Group, part of Privacy & American Business, is composed of 16 CPO Classics — Westin calls them "strategically oriented CPOs" — from organizations such as Citigroup Inc., American Express Co., Bank of America Corp., the U.S. Postal Service, Nationwide Mutual Insurance Co., Equifax Inc., Hewlett-Packard Co. and Microsoft. Nearly all of these enterprises have had CPOs since 2001.

### Clout Is Critical

In the Information Age, it seems clear that the relationship between a CPO and his employee's IT organization is critical. The Ponemon Institute LLC, a Tucson, Ariz., think tank focused on corporate privacy issues, recently surveyed 64 companies that have CPOs. According to institute Chairman Larry Ponemon, companies whose "CPO has at least a dotted-line relationship to the CIO tend to have more effective privacy programs."

The key reason, Ponemon adds, is that privacy is so tied into IT functions that even the best privacy policies are fruitless unless they can be implemented — reliably and repeatedly — by the IT group. Indeed, Westin says, "Many of the hard issues facing companies are shifting also to CIOs. Their systems must track opts, do-not-call lists, etc., and must try to develop more secure customer and consumer identification — especially to control ID theft."

Former CPOs and privacy experts say this relationship varies widely from company to company, relying almost totally on the CPO's background and personality.

"I'd call those relationships 'intense by variety,'" says former Microsoft CPO Purcell. "People in IT have titles and credentials that are provable. ... They often have a hard time with a privacy person because there's no objective credentials. A CPO could be from legal, compliance, HR, anything. Partly because of this disconnect, many CIOs are unsure of their role, 'unless a smart CPO creates a working committee that brings the CIO into a privacy task force,'" Westin says.

One thing seems clear: As Westin says, regardless of the future of the CPO, "in smart companies, CIOs are front and center" where privacy is concerned.

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### CPOs AND PRIVACY

Privacy and regulatory issues are landing on the chief security officer's plate, too. Is that too many functions to ladle out to one position?

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a strategy that uses people, processes and technology to store and tap critical business data throughout its lifespan of value.

**IN THIS EDITION:**  
See how companies are turning their new regulatory challenges into business opportunities by leveraging the benefits of Information Lifecycle Management.

## Information Lifecycle Management: The Smart Way to Save Money

**CERTAINLY, SMART COMPANIES** recognize that information is the linchpin of their success. In most organizations, corporate information is their most valuable asset, the key ingredient by which innovative new business models are built.

"The ability to use and leverage information as a company to drive additional business is critical," says Mark Lewis, chief technology officer at EMC in Hopkinton, Mass. "For many companies, smart use of information has truly become a differentiator, particularly as technology provides companywide access."

But if innovative information management is the ultimate goal, then the immovable object squarely in its path

is the reality of today's lean IT budgets. Technology is the vital framework on which companies rely to help business information flow freely, but many worthy efforts have been hamstrung by the flat or declining budgets of the past several years.

Yet limited resources are no excuse for limited action, says Chuck Hollis, vice president of platform marketing at EMC. "More and more companies are realizing that information is money, and they have to do a better job of managing their money," he says. "But all this is happening as IT budgets are flat and labor costs are growing."

Spurred by boardroom-level concerns about the escalating costs of

## TECHNOLOGY OPERATIONAL EFFICIENCY: BUSINESS DRIVERS

**"Our business was able to cut support staffing by 30 percent, yet increase its throughput by 20 percent. [ILM] had a significant bottom line impact and a net delta of somewhere around 10 percent in our profitability, directly attributable to this planned technology."**

—BRIAN ROGERS,  
Rogers Medical  
Intelligence Solutions

1 hour 10 min

technology, IT executives have embarked on a constant search to make their infrastructure as streamlined and cost-efficient as possible.

Many have already implemented measures that address cost-cutting on a piece-meal basis—server consolidation or outsourcing, for example—but also need a method of reducing infrastructure and information management costs enterprise-wide. One intriguing answer: Information Lifecycle Management (ILM), which offers an opportunity to streamline infrastructure costs across the board by tying the business value of information to the cost of managing it.

"If you think of information like assets, Information Lifecycle Management is the alignment between the value of information and how much a company is spending to make it available to people," says Hollis.

Information Lifecycle Management can help streamline operational costs. New York's Rogers Medical Intelligence Solutions has recognized significant cost savings through Information Lifecycle Management, according to Robert Terdeman, the company's vice president and chief information architect. "One of the key results is that our business was able to cut support staffing by 30 percent yet increase its throughput by 20 percent," says Terdeman. "It had a significant bottom line impact and a net delta of somewhere around 10 percent in our profitability, directly attributable to this planned technology."

## TECHNOLOGY OPERATIONAL EFFICIENCY: BUSINESS DRIVERS

Much has changed over the past several years for companies that rely on online information for strategic value. Consider:

**Budget Constraints.** While CIO magazine's latest quarterly Tech Poll forecasts a modest increase in IT budgets for 2004, caution is still the watchword. Nearly one-third of survey respondents say that ongoing financial constraints affect IT spending, while nearly 60 percent say that spending

## OPERATIONAL EFFICIENCY: BUSINESS DRIVERS

- Budget Constraints
- Explosive Information Growth
- Manual Processes
- Fragmented Management Strategies
- Regulatory Compliance Issues

on computer hardware will remain flat or decrease.

**Explosive Information Growth.** Companies are squelching away unprecedented quantities of data in many forms—the structured information that lies in databases as well as the unstructured, file-based information that lies in Word and Excel documents across a network.

"Information is growing at a ridiculous rate," says Steve Kenniston, a technology analyst at Enterprise Storage Group, a research company based in Milford, Mass. "Where there used to be one storage administrator for one terabyte of data, now they need nine administrator to manage six terabytes, and soon it'll be one for every 14 terabytes. For that to happen, companies need to make information management more efficient."

**Manual Processes.** "Categorizing, moving and disposition of data is still a very manual process at most companies," says Hollis. "Tools are few and fragmented, and a far cry from the automated determination of policy." Worse, manual information management consumes staff time—and as Hollis points out, "Labor is the most expensive component of IT today."

**Fragmented Management Strategies.** Gaining a bird's-eye view of all that information is no small task. Without a comprehensive strategy, it's difficult for companies to manage the data that's spread across an entire enterprise.

**Regulatory Compliance Issues.** New regulations and corporate governance mandates for the storage and management of information mean that companies must

be able to retrieve data quickly and on demand. Faced with the difficult and time-consuming task of accessing data that may well be spread across a variety of sources—or that may have been deleted—it's small wonder that companies can be frightened into taking a "save it all" approach.

These issues are prompting CIOs to recognize that the real opportunity to drive big costs out of IT is to look across the entire lifecycle of the information and the infrastructures that support it. In short, Information Lifecycle Management.

As detailed in earlier parts of this series, Information Lifecycle Management is not a product but rather a method of harnessing informational chaos. "[It] is a strategy, and one that encompasses people, processes and technology," says Kenmiston. Done right, ILM is proactive and dynamic, and

#### INFORMATION LIFECYCLE MANAGEMENT ENABLES OPERATIONAL EFFICIENCY

- Improve Classification
- Leverage Existing Assets
- Enable Policy Automation
- Tier Storage
- Decrease Compliance Costs
- Stretch IT Resources

helps companies plan IT growth to meet their anticipated business needs. "[Information Lifecycle Management] is the ability to provide companies with access to information—the right information—and the most up-to-date and logical version across the enterprise," says Tanuja Randery, vice president for global strategic initiatives at EMC. "If companies want to access and use information to their business advantage, ILM enables this by providing a unified approach to viewing and access while ensuring that the cost and performance of the infrastructure is optimized."

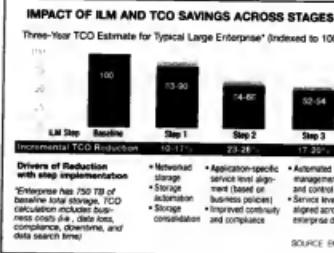
#### LINKING INFORMATION LIFECYCLE MANAGEMENT AND OPERATIONAL EFFICIENCY

Implementing Information Lifecycle Management can help companies manage information both more wisely and less expensively. By building an information management strategy based on this discipline, companies can build cost savings into their infrastructure in a holistic fashion. Information Lifecycle Management Helps:

- Improve Classification. Many companies don't even know what they have for equipment. Information Lifecycle Management, which starts with a thorough inventory of physical and informational assets, ensures that companies know exactly what they have, which helps them make better-informed spending decisions. By conducting a data classification and prioritization study, companies can ensure that data is placed on the level of storage most appropriate to its business value. Many times, that means calling in outside experts. "Information Lifecycle Management consultants are part of the storage companies' bench teams," says Pete Gerr, an analyst at Enterprise Storage Group. "They have the services and tools that will help an organization classify and value their data, taking a step toward having a fully realized strategy."

- Leverage Existing Assets. Once companies know exactly what's there, they can better prioritize information assets in accordance with information management policies. "If you know up front what you have and how much data is being created, you'll do better capacity planning," says Kenmiston.
- Enable Policy Automation. The ability to simplify and automate technical infrastructure through Information Lifecycle Management means that companies can lower business costs and hire fewer people. "You get efficiencies by automating the things that people have to do today," Hollis explains. By creating and then automating policies

**"Information is growing at a ridiculous rate. Where there used to be one storage administrator for one terabyte of data, now they need one administrator to manage six terabytes, and soon it'll be one for every 14 terabytes. For that to happen, companies need to make information management more efficient."**

OPERATIONAL  
EFFICIENCY

to drive information management, companies can streamline operations and cut costs. "The principal savings is around the dynamic movement of data," says EMC's Lewis. "The value of data changes over time, and ILM helps flexibly move data to the appropriate level of storage as its business value changes."

- **Tier Storage.** Classifying data enables IS executives to create tiered storage that matches the business value of the data with the corresponding price/performance layer of storage. For example, mission-critical applications might reside on high-performance disks, while important but less critical data land on less costly ATA disks. "Having high-end, mid-tier and archive storage makes a lot of sense financially and from a recoverability standpoint," says Kenniston. "By migrating the lower class of information to a second tier of storage, companies save money but also keep it available and protect it more easily." As the range of options in tiered storage increases, so do the effective business continuity options for the corporate world.
- **Decrease Compliance Costs.** Information Lifecycle Management handles data according to its business value at a very granular level, so CIOs know what data should be kept and what can be deleted,

QUESTIONS ABOUT  
INFORMATION  
LIFECYCLE  
MANAGEMENT?

If you've got any burning questions about Information Lifecycle Management—and how you can begin implementing such a strategy—send them to [ilm\\_questions@emc.com](mailto:ilm_questions@emc.com). We'll answer the most frequently asked questions later in this series.

thus saving money. It also makes compliance much simpler, so companies are less likely to incur compliance-related expenses such as legal fees or staffing costs.

- **Stretch IT Resources.** Automating information management in accordance with data policies means that CIOs will be able to redeploy existing staffers to other projects, making their resources go further for the same money. "If companies can automate the process and take the human aspect out of it, it saves them money," says Kenniston. "Once CIOs are convinced that storage can be automatically moved to the right asset when they want to move it, automation is the next step."

In an era of increasing concern over the cost of technology, CIOs see the wisdom of embracing budget reduction strategies that add value as well as cut costs. One important step is to implement a strategy that works across the entire company to manage information holistically.

"By implementing Information Lifecycle Management, we believe that CIOs can expect to see a net of up to 50 percent actual cost savings in overall storage costs," says EMC's Lewis. Companies can make sure that they drive all possible extra costs out of managing and storing information—and at the same time, truly give business leaders what they need to thrive.

"If you recognize that information is a core company asset similar to physical plant and human resources, then you really understand the value of an integrated storage solution," says Terdeman. "Because what you're really storing are critical company assets in a managed and efficient way."

**NEXT:** In the next part of this series, we'll look at Information Lifecycle Management for small to medium-sized enterprises (SMEs).

**EMC<sup>®</sup> FOR MORE INFORMATION**  
Information Visit [www.emc.com/il](http://www.emc.com/il)  
for an in-depth look at Information Lifecycle Management products, services and strategies.





BY RUSSELL KAY

**T**O HELP the reader sort through the range of terms thrown around in the privacy debate, here's a glossary that we've divided into two sections: commonly understood notions, and related technological terms.

### Notions of Privacy

Within the context of the Internet, the right to privacy is still being defined. Generally, it involves a person's right to control what information about himself is revealed and to whom, as well as what others may do with that information. It's not the same thing as secrecy, but the distinction is sometimes murky. Privacy isn't an absolute right, since it's often trumped by laws and overriding social needs. For example, law enforcement officials may obtain warrants that allow them to intercept communications or search physical areas, activities that otherwise would be forbidden.

**ANONYMITY** There are times when we're willing to supply personal information, provided it's not connected directly to us. When we respond to a survey, for example, we may feel comfortable about revealing personal information, such as income and lifestyle choices, because we believe that our answers won't be linked in any way to our names or other identifying information. And there are other times when anonymity can be desirable — for example, when reporting a crime.

Online, we can use an Internet site called a remailer that reposts a message from the site's own address, thus concealing the originator of the message. However, remailers have a tarnished image, since many spam distributors also use remailers. (See also *anonymizer*, below.)

**CONFIDENTIALITY** Despite the absence of legal compulsions, most of us expect to be able to hold at least some personal information in confidence, and if we give that information to

someone — such as when filling out a loan or employment application — we expect the other party to take security measures to protect that information and not to share it with others.

**PRIVACY IN THE LAW** The Privacy Act of 1974 asserts that an agency of the U.S. government must not reveal the existence of any personal data record-containing system, and each agency that maintains such a system must describe publicly both the kinds of information in it and the manner in which it will be used. The law defines eight principles on which to base and enforce privacy policy: openness, individual access, individual participation, collection limitation, use limitation, disclosure limitation, information management, and accountability.

**PSUEDONYMITY** This concept originated in the field of cryptography. Pseudonymity is the ability to prove a consistent identity without revealing one's actual name, instead using an alias or pseudonym. Pseudonymity combines many

of the advantages of both a known identity and anonymity. In anonymity, one's identity isn't known, but pseudonymity creates a separate, persistent "virtual" identity that can't be linked to a specific person, group or organization. Pseudonymous remailers, called "mym servers," take messages addressed to the pseudonym and resend them

to the pseudonym's real e-mail address, and they can also forward messages to others as though they came from the pseudonym's address on the server. And unlike with anonymous e-mail, users can reply to a pseudonymous sender, and pseudonyms can establish reputations in the digital world.

### Privacy-related Terms

**ANONYMIZER** Sometimes called a Web anonymizer, this privacy service lets a user visit Web sites while preventing those sites from gathering information about the user's mailing IP address, browser and operating system identification, and cookie-stored data or which sites he has visited. Anonymizers usually work by using a proxy server to process HTTP

requests. When the user clicks on a hyperlink or types a URL, the anonymizing server intervenes and gets the information for the user. The Web site whose page is being requested gets only information about the anonymizer server, not the user's computer. An anonymizer makes a user feel that his privacy is better protected on the Internet, but it also prevents personalization, so sites can't tailor their content to suit the user, and he may have to re-enter personal identification repeatedly (such as when making purchases).

**OPT-IN/OPT-OUT** An important distinction in the privacy debate concerns the terms under which e-mail marketers (legitimate ones, not spammers that ignore ethical and legal concerns) can contact users. Opt-in is the consumer-friendly position, where companies can send e-mail only to people who have directly given their consent for such communications, typically by signing up at a Web site. Opt-out is the marketer-preferred alternative under which marketers can e-mail to anyone who hasn't specifically told them not to. Unfortunately, spammers have used opt-out replies as a way of verifying valid e-mail addresses.

The Internet Direct Marketing Bureau has endorsed opt-in e-mail as the best practice for its marketer members.

**PRIVACY POLICY** Most Web sites have a page describing in detail the site's privacy practices and what the site's owners will do with any information they collect.

**P2P** Short for "Platform for Privacy Preferences Project," this is a standard XML format adopted by the World Wide Web Consortium for Web sites to use to encode their privacy policies [see *QuickLink*, 33484]. P2P recommends practices

that will let users define and share personal information with Web sites that they agree to share it with. Using software that adheres to the P2P recommendations, users can create a personal profile and make it (or parts of it) accessible to a Web site as the user directs.

**RFID** Now on the verge of becoming a widespread supply chain tool, radio frequency identification tags are getting smaller and cheaper, and privacy concerns are being raised. It may not be long before such tags are built into individual items (such as clothing), not just shipping pallets, allowing an unprecedented amount of automated monitoring of people's habits, behaviors and locations.

**SPYWARE** Any technology that aids in gathering information about persons or organizations without their knowledge. On the Internet, spyware is programming that's secretly installed in a computer to gather information about the user and relay it to advertisers or other interested parties. Spyware can infiltrate a computer as a virus or as a surprise result of installing a new program. Data-collecting programs installed with the user's knowledge aren't spyware as long as the fully fledged understands what data is being collected and with whom it will be shared. If your computer has spyware in it, be aware that you have a "live" server sending information about your surfing habits to a remote location. **45194**

Kay is a Computerworld contributing writer in Worcester, Mass. Contact him at ruskay@yahoogroups.com.

### Privacy Resources

For a listing of more sources of information and links to online resources, see

**QuickLink 45194**  
www.computerworld.com

Are there technologies or issues you'd like to learn about in QuickStudy? Send your ideas to quickstudy@computerworld.com. To find a complete archive of our QuickStudies, go online to

**www.computerworld.com/quickstudies**

### WEB BEACONS

Also called Web bugs, pixel tags or clear GIFs, these file objects (typically a single transparent pixel invisible to the user) are used along with cookies to help track the behavior of Web site visitors. Users can set their browsers to accept or decline a cookie, but a Web bug always arrives; it's just another graphic on the page. Turning off cookies will prevent tracking your specific activity, but the Web beacon can still record an anonymous visit through your IP address. Web beacons are typically used by a third party to controller monitoring from a number of different sites. Web bugs can be put to positive use, such as to track copyright violations on the Web.

ILLUSTRATION BY JEFFREY L. HARRIS

# The Almanac

An eclectic collection of research and resources. By Mitch Betts



## Camera Phones

Today's camera phones could be used for corporate espionage or privacy violations. Here are Gartner Inc.'s recommendations for a corporate policy:

- 1 Establish a clear policy but not an outright ban.
- 2 Create clearly marked secure zones, where all photography is forbidden.
- 3 Ban photography of lenses that are confidential to the company.
- 4 Prohibit taking pictures of other people without their permission.
- 5 Insist that no photographs be taken in places where personal privacy is expected.

## Research Roundup

■ Among federal government agencies, the U.S. Postal Service gets the highest "privacy trust score" from the general public, according to a study by Ponemon Institute LLC and the CIO Institute. The CIA and the Department

of Justice got low marks in the survey of 6,000 Americans.

- "Current IP telephony products and implementations demonstrate an alarming lack of protective security measures, leaving the enterprise open to privacy violation, fraud and malicious attacks," warns Mitel Group Inc.
- In a survey of 948 people who were recently hospitalized, 63% of the respondents said they support the idea of having a complete, computerized medical record that could be accessed anywhere in the hospital. But 58% said they're concerned about the privacy of their records. The survey was commissioned by Siemens Medical Solutions in Malvern, Pa.

## Bell Labs Software Hides Wireless Users

People who don't want their wireless carriers to keep track of their whereabouts and send unsolicited messages can gain greater control over their privacy with new software from Bell Labs. The technology allows mobile phone users to specify what location information they wish to share, when, with whom and under what criteria, according to researchers at Bell Labs, a division of Lucent Technologies Inc.

Many European and U.S. carriers already offer a range of location-based services, enabling them to track customers and send them relevant local information about, say, restaurants, movie theaters and retail stores. While some users appreciate such services, others prefer not to expose themselves to constant surveillance.

The Bell Labs system is analogous to querying a database. The request is checked against the user's preferences and filtered through a rules engine, known internally at Bell Labs as "Houdini," before action is taken. This entire process takes only a few milliseconds.

The technology could appeal to users in the corporate sector, researchers say. Equipment vendors, for instance, may want to know the loca-

tion of their technicians during regular working hours, but in the evening, the technicians may prefer to disable location-sharing with their bosses.

— John Blau, IDG News Service

## FTC Nets Penalties For COPPA Charges

The U.S. Federal Trade Commission recently settled with two Web site operators charged with violating the Children's Online Privacy Protection Act (COPPA), netting the agency the largest civil penalty yet under the law.

Bonzi Software Inc. and UMG Recordings Inc. were accused of collecting personal information from children online without their parents' consent and settled for penalties of \$75,000 and \$400,000, respectively. Santa Monica, Calif.-based UMG Recordings operates music-related Web sites and was charged with collecting birth-date information from

children through its online registration process, the FTC said.

San Luis Obispo, Calif.-based Bonzi Software, which distributes a free software download called Bonzi Buddy, was the first company charged for privacy violations over a download, the FTC said. — Scarle Pruitt, IDG News Service • 45098

## Conferences

**Computers, Freedom and Privacy Conference**  
April 20-23, Berkeley, Calif.  
<http://cfp2004.org>

**IT Compliance World**  
May 17-19, Boston  
<http://itcompliance.com/conference>

**National Global HR Privacy Conference**  
May 26-27, Washington  
[www.pewlab.org](http://www.pewlab.org)

**Privacy & American Business**  
Annual National Conference  
June 22-24, Washington  
[www.pancab.org](http://www.pancab.org)

**MORE RESOURCES**  
Get privacy news, columns and resources at our online Privacy Center:  
 [www.computerworld.com](http://www.computerworld.com)

## Privacy Policy Road Map

Here's a guide to crafting a privacy policy as the first step in enterprise privacy management. Remember, a privacy policy is no good if customers don't know about it, employees can't implement it and the company doesn't enforce it.

By Mitch Betts, Computerworld



# Still Need Proof of Storage Interoperability?

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To register to attend Storage Networking World and see the Interoperability & Solutions Demo,  
visit [www.snwusa.com](http://www.snwusa.com)



SNAPSHOTS

## Cost of Privacy

**Setting up a privacy program office is the costliest part of privacy efforts at major corporations. Here are the most expensive parts of that cost center:**

- 1 Salaries of privacy and data protection staff**
  - 2 Travel expenses for meetings**
  - 3 Outside consultants**
  - 4 Professional associations**
  - 5 Specialized education and training**

Making the Grade

A consumer group recently issued a report card on the financial privacy practices of 55 California financial services companies. The following are the top grades:

The following got the top grades:

**A+** Picnic Life Insurance Co  
Star One Credit Union

A E-Loan Inc.

**A-** First Republic Bank  
State Farm Insurance Cos  
21st Century Insurance Group  
Foothills Fund Insurance Co

### Most Trusted

### A ranking of the industries that consumers trust most to protect personal information

- 1** Hospitals, clinics
  - 2** Pharmacies
  - 3** Banks
  - 4** Charities, religious groups
  - 5** Airlines
  - 6** Car rental companies
  - 7** Utilities

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JAY CLINE

# The RFID Privacy Scare Is Overblown

**T**HE PRIVACY SCARE surrounding radio frequency identification tags is greatly overblown. No company or government agency will be secretly scanning your house to find out what products you've purchased, because there's no feasible way to do so. But if RFID chip makers don't soon allay these fears, the escalating public emotion about this issue may effectively ban the most valuable implementations of this remarkable technology.

Hospitals imagine a day when RFID tags will help prevent medical errors by transmitting the correct medicine dosages to nurses. Appliance makers and food producers envision faster and more targeted recalls of defective products. Clothing and shoe stores suspect RFID tags to help identify items of the right sizes for customers, enabling faster service. Clothing makers hope the tags will be able to tell washing machines how to best wash items.

Sounds too good to be true? Wal-Mart and the Pentagon don't think so. They're committing on RFID tagging to bring them savings of several billion dollars from lower inventory management costs. Items will no longer need to be individually hand-scanned, thus expediting product loading, unloading and customer checkout. Scanners might be placed at shelves to speed re-stocking and installed at building exits to prevent theft. These lucrative benefits prompted both organizations to mandate that their suppliers tag cases and pallets with RFID chips by January 2005.

So what's the problem? Privacy advocates are concerned about tags on products continuing to emit signals in the parking lot, on the road and at home. They're worried that using charge cards or loyalty cards during checkout could result in customer identities being written to the tags. In the worst scenario, they imagine stalkers and thieves scanning cars and homes for telephone numbers and personal information.

Some companies are already experiencing a customer backlash with their product-level tagging trials. Shoppers at a New York clothing store recently complained about the prospect of their clothing sizes being beamed into the air. Wal-Mart reportedly had to cancel a pilot when it tagged packages of high-end clothing with bar codes because of negative consumer feedback.

Studies of people being tagged have only heightened worldwide fears of Big Brother. In Mexico, some children have reportedly had RFID chips implanted under their skin so they can be tracked if they're kidnapped. A company in Brazil has supposedly embedded chips

into employees' skin to control their access to buildings. A school in Buffalo, N.Y., requires students to wear RFID-tagged badges to track arrival times. Some have speculated on the benefits of using implanted RFID chips to store patients' medical and criminal histories. With friends like these, does Wal-Mart need enemies?

The RFID hype has certainly outpaced reality. Manufacturers and retailers have yet to agree on a universal electronic product code. RFID scanning is also far from error-free. But more important, RFID signals are so weak that they're easily blocked by metals and dense liquids. It's impossible today for someone driving a vehicle down your street to intercept signals from RFID-tagged goods inside your home.

The economics of RFID chips also limit how they're used. Until the price of RFID chips comes down to about a penny apiece, they'll mostly be used at the case and pallet level, clear of any personally identifiable activity. So we have several years to identify the privacy controls we want to see in RFID systems.

Some chipmakers are already creating these privacy controls. Chip makers and users are discussing how the principles of data privacy could best be built into the RFID process. A top priority is notifying customers that certain items are tagged with these transmitters — which could be done by placing a common RHD logo on product packages. To give customers the ability to turn off the transmitters, some companies plan to make their post-offices RSA Security Inc. is also developing a chip that could be worn on watches or bags to block nearby RFIDs from transmitting certain information. So, the RHD logo will be a selling point.

But the gathering storm against RFID tags may soon surpass these positive efforts and make product-level RFID tagging taboo. RFID makers and users should take a time-out from their technical discussions and start talking more with the public about what's going on. Their dreams of big economic returns may well depend on it. **AARON S.**



## SNAPSHOTS

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**BASE:** 441 U.S. based Fortune 500 companies  
**SOURCE:** THE COST OF PRIVACY SURVEY AND FORUM BY COMPUTERWORLD AND FORRESTER RESEARCH INC.

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**BASE:** COMPUTERWORLD'S 2004 FINANCIAL SERVICES SURVEY  
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<b>Airlines</b>
<b>Car rental companies</b>
<b>Utilities</b>

**BASE:** Survey of 1,000 U.S. consumers  
**SOURCE:** FORRESTER RESEARCH INC. AND FORUM BY COMPUTERWORLD, SAN FRANCISCO, NOVEMBER 2003

JAY CLINE

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JAY CLINE

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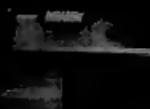
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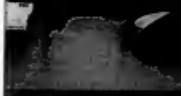
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**PLEASE TAKE NOTICE** that Philip V. Martino, chapter 7 trustee for the bankruptcy estate of **Xentex Technologies, Inc.**, will (himself or through proxy) conduct a public auction on **April 14, 2004, at 1:00 p.m.** at the United States Bankruptcy Court for the Northern District of Illinois, Dirksen Federal Building, 219 South Dearborn Street, Courtroom 680, Room 610, Chicago, Illinois, of the bankruptcy estate's intellectual property described below and an automobile pursuant to bidding procedures that the bankruptcy court has approved.

"Intellectual Property" includes, but is not limited to, Xentex's patents (including, but not limited to, US Patent no. 6,081,207; US Patent no. 5,949,643; US Patent application serial no. 09/690,799; Chinese patent application serial no. 99816492.5; Taiwan patent application serial no. 088109026); and the following, whether or not they be in the Trustee's possession: Xentex's trademarks or service marks and the good will appurtenant thereto; Xentex's copyrights and works of authorship; Xentex's drawings; Xentex's laboratory books; all of Xentex's originally-authored, solely owned or duly licensed software (subject to the terms of applicable license agreements, if any); Xentex's object codes, source codes and hardware related to any of Xentex's actual or proposed products; Xentex's blueprints; Xentex's customer and supplier lists; Xentex's computers, floppy disks, hard drives, cd roms or dvds; or any paper or electronic document related thereto and other intellectual property of every sort and description.

"Automobile": Xentex's 2000 Jeep Grand Cherokee.

To qualify to participate in the auction, any party bidding must deliver to the Trustee's counsel at or before the auction, among other things, an advance cash earnest money deposit of \$12,500 for the Intellectual Property and \$1,400 for the Automobile, both in the form a cashier's check or certified check. A complete copy of the bidding procedures is available upon request by contacting the undersigned the Trustee's counsel. The Trustee will seek approval of the results of the auction before the Honorable John H. Squires, United States Bankruptcy Judge, on **April 15, 2004 at 9:30 a.m.** at the United States Bankruptcy Court for the Northern District of Illinois, Dirksen Federal Building, 219 South Dearborn Street, Courtroom 680, Chicago, Illinois.

For a complete set of bidding procedures, please contact the Trustee's attorney, Colleen E. McManus, **PIPER RUDNICK LLP**, 203 North LaSalle Street, Suite 1800, Chicago, Illinois 60601-1293, phone: (312) 368-7027, or email [colleen.mcmanus@piperrudnick.com](mailto:colleen.mcmanus@piperrudnick.com).

## IT Careers in Financial Services

Tens of thousands of jobs were cut in the financial services sector over the past three years. But the cycle seems to be changing as new investments in technology and an up tick in job postings are replacing news of layoffs.

In two recent reports, Financial Insights and IDC noted increases in financial services IT spending for everyone from Wall Street to community banks. IDC's 2004 report, U.S. IT Spending Forecast Update by Vertical Market, found that IT spending in banking and manufacturing leads all industries for the next four years, the combination of the two accounting for one-third of the \$391 billion to be invested in IT.

**Peeling back that investment.** Financial Insights looked at the specifics of IT in financial services in three categories – capital markets, corporate banking and retail financial services. In the capital markets category, Financial Insights predicts Wall Street firms will reduce the complexity of data infrastructure and invest in automated systems for trading and credit risk management. The corporate banking category within financial services is expected to invest in profitability management tools, customer e-commerce, integration of legacy systems and new models in business-to-business



The investment levels have to be balanced with other trends. While capital markets are expected to reduce the number of IT vendors, reports indicate American Express will continue to heavily outsource IT work (some estimates as high as 70%). Charles Schwab/CyberTrade cut 10,000 jobs during the down cycle but said this month had more than

100 jobs posted. The corporation is looking for information technology experts to help them push forward their strategy of personal investment consulting. Jobs ranging from business analysts to programmers to application developers are posted, along with a plum job as vice president of Schwab Investment Management Technology.

The Charles Schwab story is re-enacted across the sector. The American Banking Association's community banking division lists information technology offices as one of the top three most difficult slots to fill, alongside compliance and trust officers. According to Heather McElrath, ABA spokeswoman, community banks are expanding physically with new branches and need to continuously upgrade their online banking capability for customers who want 24 hour per day service. Both require complex IT systems in a niche of financial services that has been slowly building capability over the past four years.

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*Continued from page 1*

# SOL Server

chitect at Tacoma, Wash.-based Labor Ready Inc. Gilbert said the temp-labor services firm had hoped to start using Yukon this year to take advantage of the integrated Visual Studio tools, plus new features for large databases. But Gilbert said the first beta release of Yukon still needed a lot of work. For instance, he said, several workbench management tool features weren't activated yet.

### **Customers Respond**

Larry Godec, CIO at First American Title Insurance Co. in Santa Ana, Calif., said he fired off a note to Microsoft as soon as he learned about the new delay. First American uses SQL Server 2000 to run a homegrown title and escrow transaction system for 10,000 users in 1,200 offices. The database server has to be shut down for more than 14 hours every time the company reindexes the system. But Yukon is supposed to allow maintenance while the database is online, Godec said.

"My note to Microsoft was, if it's going to be delayed to 2005, you need to figure out how you get that functionality into SQL 2000 for 05," he said.

Don Watters, data group manager at film processor PhotoWorks Inc. in Seattle, said, "I've been touting [Yukon's] abilities to so many people here and in other organizations that I'd like to actually be able to show them that it's going to become a reality someday."

Watters said he fears that the SQL Server team's continued focus on Yukon means it won't devote much attention to fixing bugs in SQL Server 2000. But he hopes Microsoft will take advantage of the delay to correct such things as security flaws before shipping the upgrade.

Yukon, which Microsoft said will be called SQL Server 2005, will add 64-bit support and enhancements in areas such as scalability and security. The software was originally due out last year but was delayed until the middle and then the end of this year.

Tom Rizzo, director of product management for SQL Server, said the upgrade was delayed yet again because of feedback from users and partners that have tested the software. "In the database world, you can't release a poor product," he said. "We aren't date-driven; we're quality-driven."

A second Yukon beta release is scheduled to become available in the next few months, along with the first test version of Whidbey. But Atzizo said the Yukon beta still won't have all the promised functionality and will be fol-

lowed later this year by the third beta, which will be run in production by a group of about 15 customers. "There are a lot of areas we want them to test it [in] in the real world," he added, citing as examples Yukon's data management, usability, security and developer productivity features.

SQL Server 2000 will be nearly five years old by the time Yukon ships. Microsoft is taking "an insanely long time between major database releases," said Mark Shainman, an analyst at Meta Group Inc. "It's getting comical." He noted that Oracle Corp. has come out with both the 9i and 10g versions of its database in the same amount of time.

Some users aren't getting anxious. "In terms of the delay, it will not impact us in a major way," said Kirk Pothos, a software development manager.

It won't be longer [than late 2004]. ... We're really locked down. The SQL Server team is a pretty well disciplined team. There's not a lot of unknowns.

In the database world, you can't release a poor product. We aren't date-driven; we're quality-driven.

at Xerox Global Services Inc. Pothos said he's interested in some of Yukon's features, including database administration improvements. But, he added, "we always build some leeway into our schedule for such things."

However, a database services manager at an international cosmetics manufacturer and retailer said his company's developers will have to scrap plans to write a sales force application to tap into Yohaku and Whistley. The application was to be ready later this year, so the developer will use the current versions of Visual Studio and SQL Server, said the IT manager, who asked not to be identified. "I applaud [Microsoft] for not taking a step backward by putting out a product that's not ready," he added. "But that doesn't mean I'm happy about it."

## **Delay Raises Questions About Software Assurance Contracts**

Microsoft's disclosure that the release date for Yukon has slipped again gave some SQL Server users even more to think about than the potential impact on their IT project plans.

Many Microsoft server customers signed contracts for the Software Assurance program that the company introduced in October 2001, paying an annual amount equal to 25% of their upfront license fees. The contracts cover two or, more typically, three years, and customers gain the rights to the upgrades of the covered products released during that time.

**Microsoft last September enhanced Software Assurance by adding support and training options, as well as home-use rights for Office. But the latest delay of Windows will likely mean some SQL Server users won't get an upgrade until those initial problems are resolved.**

**Tm certainly disappointed.\***

"The misconception out there is that Software Assurance is just about upgrades," said Sunny Cherkobis, a product manager for worldwide licensing and pricing at Microsoft. She said Microsoft has worked hard to help customers understand the value of Software Assurance and commissioned Forrester Research Inc. to develop a tool to calculate the return on investment.

But Alvin Park, an analyst at Gartner Inc., said that he's not convinced users "see enough added value above and beyond a potential upgrade to want to buy Software Assurance."

Former analyst Julie Gara said many of her clients are approaching renewed dates for Software Assurance in the next four months. The timing of the delay "is certainly going to present Microsoft with some difficulty," Gara said. "SQL Server customers especially should be trying to get concessions from Microsoft."

Users aren't forced to buy Software Assurance and aren't guaranteed

anted an upgrade, said Tom Russo, director of product management for SQL Server. He added that Microsoft will continue to enhance Software Assurance and consider extending support for older versions of SQL Server. Currently, mainstream support is due to end Dec. 31, 2005, for SQL Server 2000 and SQL Server 7.

Park said Gartner has been pushing Microsoft to offer guaranteed upgrades as part of Software Assurance, but Microsoft has balked, noting that no other vendors do anything similar.

"We can't run a business and do that," Charbonneau said.

Steve Sommer, CEO at law firm Hughes Hubbard & Reed LLP in New York, said he has already put the cost of a Software Assurance contract into his 2005 budget.

Sommer said he likes the new support options and isn't worried about upgrades because he has "a very strong feeling" that Microsoft will compensate loyal

-Carol Sorenson

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## ISPs' Spam Fight

**C**ALL IT THE REVOLT of the ISPs. Last week, the four biggest U.S. Internet service providers — America Online, EarthLink, Microsoft and Yahoo — filed six lawsuits against high-volume spammers. The lawsuits target several big-time spammers by name, along with hundreds of "John Does" — that is, spammers to be named later.

Meanwhile, news also surfaced that broadband provider Comcast has been cutting off Internet service for some customers whose computers are being used to relay spam messages.

What gives here? Has the whole ISP world suddenly gone sane?

OK, let's be fair: This surge of antispam sanity isn't *that* sudden. Some big ISPs have been filtering out spam for years, using tools such as the Realtime Blackhole List of spam sources maintained by Mail Abuse Prevention System LLC. In fact, for some ISPs, spam prevention has become a selling point.

And it's not out of altruism or good citizenship. Spam costs ISPs bandwidth, which translates into money. And the ISP's users hate spam, so less spam means happier customers.

But last week's round of lawsuits clearly kicks the ISPs' antispam efforts up a notch. Who'd have thought the tortuously named CAN-SPAM law (for "Controlling the Assault of Non-Solicited Pornography and Marketing"), which went live in January, would be more than wishful thinking for dealing with spam?

Even more noteworthy is Comcast's decision to pull the plug on customers whose PCs have been turned into spam zombies. Unlike the spammer-suing ISPs, Comcast is shutting down its own customers and risking their wrath.

But huge numbers of Comcast's cable broadband customers are native home users with no firewalls or virus protection, whose PCs are continuously connected to the Internet, making them prime targets for worms that will use them to relay spam. Going after its customers may be the only way for Comcast to protect its network.

If Comcast spots signs that a customer's PC is pumping out spam, Comcast issues a warning. If the customer doesn't clean up the problem, Comcast cuts off service.

For corporate IT shops struggling against a constant flood of spam — much of it generated by broadband-connected home users — that's

good news. Except that it's bad news, too.

Why? Because some of the users cut off by Comcast — and other broadband providers, if they follow suit — are likely to be our users.

You know the ones. They turn off antivirus software, circumvent firewalls and work around security procedures. They're security disasters looking for a place to happen. At work, we protect them from themselves. At home, we can't, and they're bound to get into trouble.

But when hapless executives and other employees discover they can no longer use the Internet to work from home because their broadband providers have cut them off, our help desks will still have to field the calls and clean up the mess.

That means we'll better get ready. And we can start by spelling out for our users just what might happen.

We can explain that broadband providers are getting serious — even heavy-handed — about dealing with customers whose PCs are infected with spam-generating worms. We can warn that their broadband service might be cut off if they don't have antivirus and firewall software.

And we can tell our users what to do if their broadband providers warn them about being spam relays. We can help clean up the problem so they'll stay connected — but only if they act immediately when they get a warning. If they wait until their service is cut off, it'll be harder to straighten out.

Sure, walking users through all that is a pain. And it shouldn't really be necessary.

But it's the price our IT shops will have to pay if we want to get the benefits of this ISP antispam revolt. © 45380



### From Bad to Worse

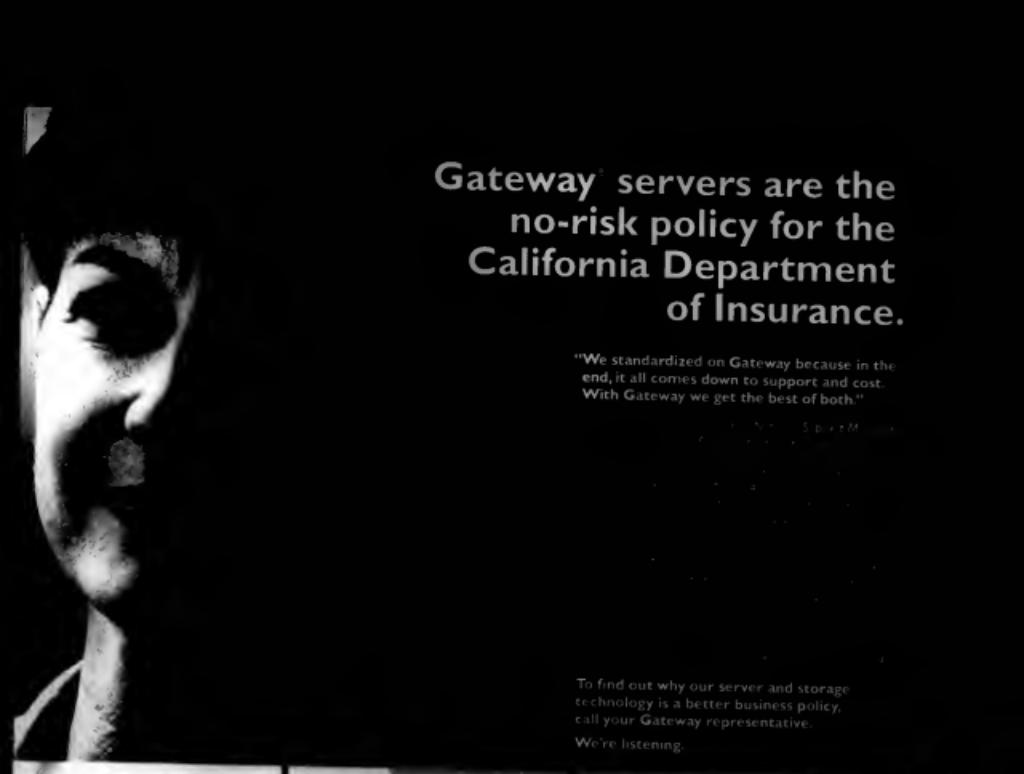
When this 24/7 server loses a disk drive, an alarm starts beeping to warn sysadmins to replace the drive in the RAID array. New disk will be installed in 24 hours, says plctf, but meanwhile the box complains about the noise. "Can it be stopped?" he asks. Not without a reboot, plctf says. "No way can we afford the downtime," he says. "But could you get a pair of site cutters and take care of the beeping?"

**Plctf,**  
Head, **Shark Tank**  
A virus is worse...  
ing hours at the  
site office of  
this hospital group, an  
IT manager previously  
prepared antibiotic disks  
for 100 clients. Just one  
problem: "All 10 disks  
had a virus on them, be-  
cause he had the virus  
on his own PC," right  
here plctf says. "None of  
these disk drives was  
infected until they got  
the disks."

**What a Surprise**  
Network administrator goes  
down, and to down the  
host's entire office net-  
work, so plctf gets  
called in to troubleshoot.  
The poor network guy  
won't be around to see  
what's been done to his  
network.

**What's Next?**  
After plctf gets caught  
up \$10,000 for broadband  
service at the Willow  
Valley hotel, his PC's  
Windows administrator  
is threatening to cut off  
his Internet connection. "I need  
the Windows Network  
Administrator and real-  
ized I would run the compu-  
ter — by name — of  
other hotel guests," he says.  
"I can't just plug it  
back in and not have  
another connection."

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